

Q.1

Test 2 Atomic Structure

Chemistry Unit Wise

The total number of electrons in a shell are calculated by:

a. 2(n)

b. (n) 2

c. 2 x X

d. 2(n)2

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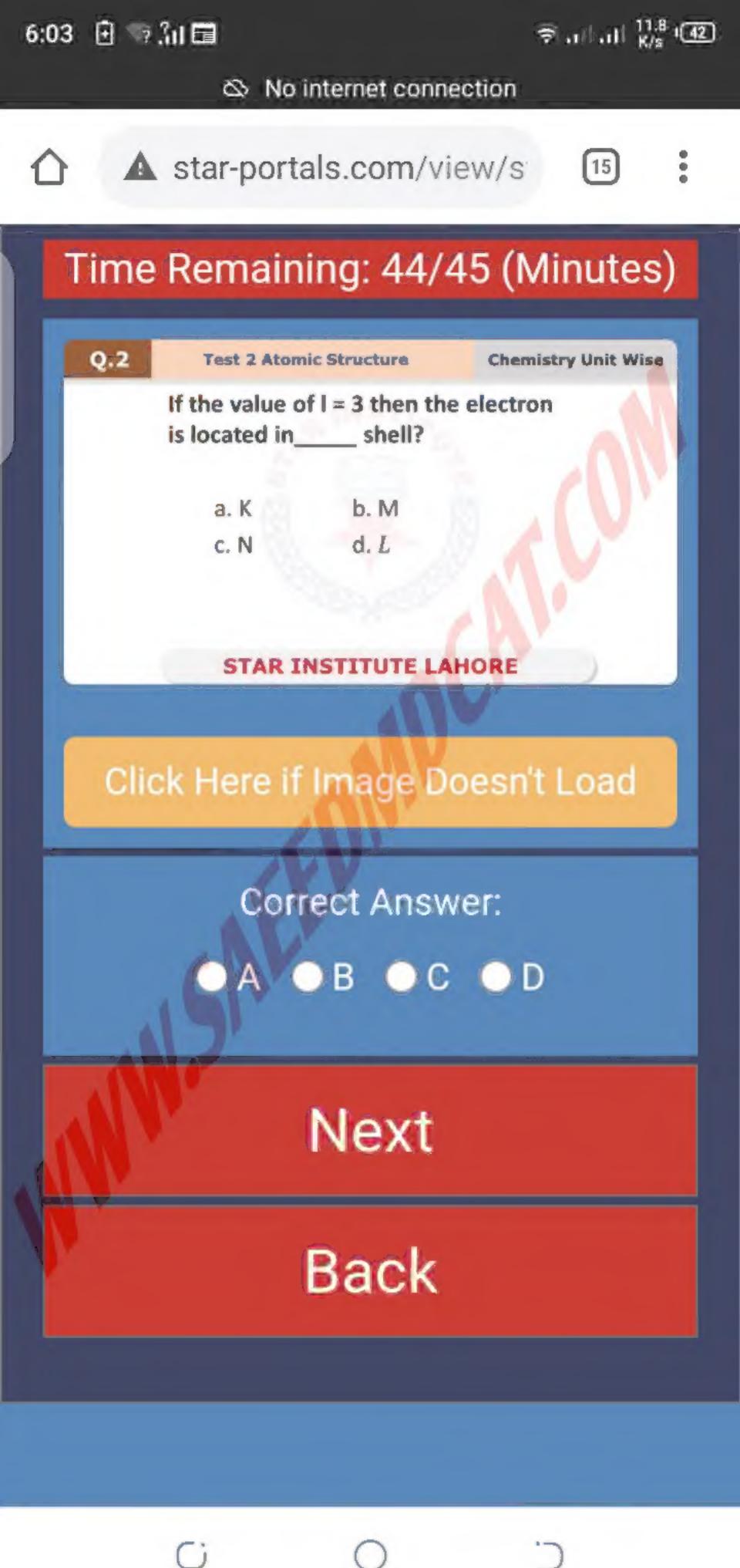
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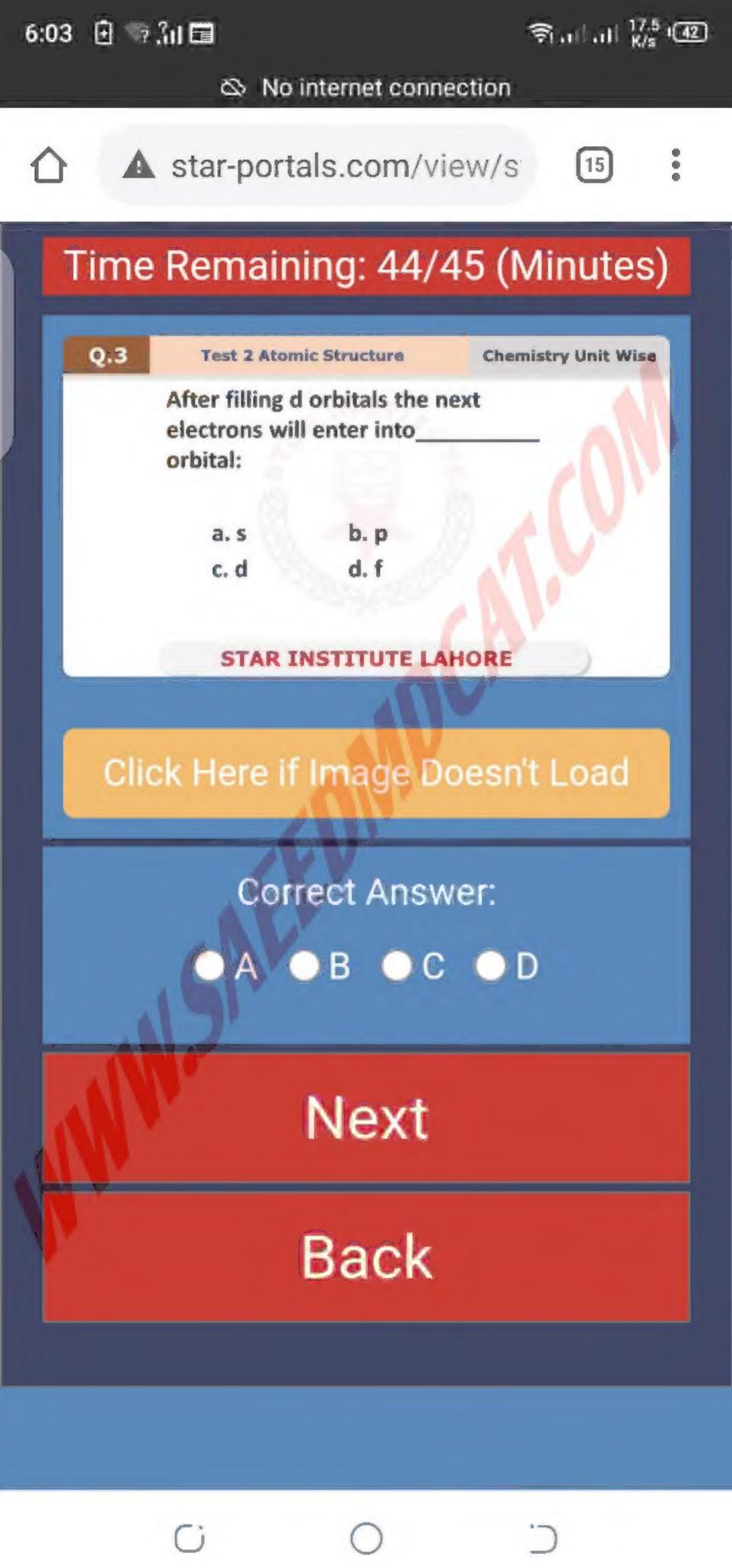
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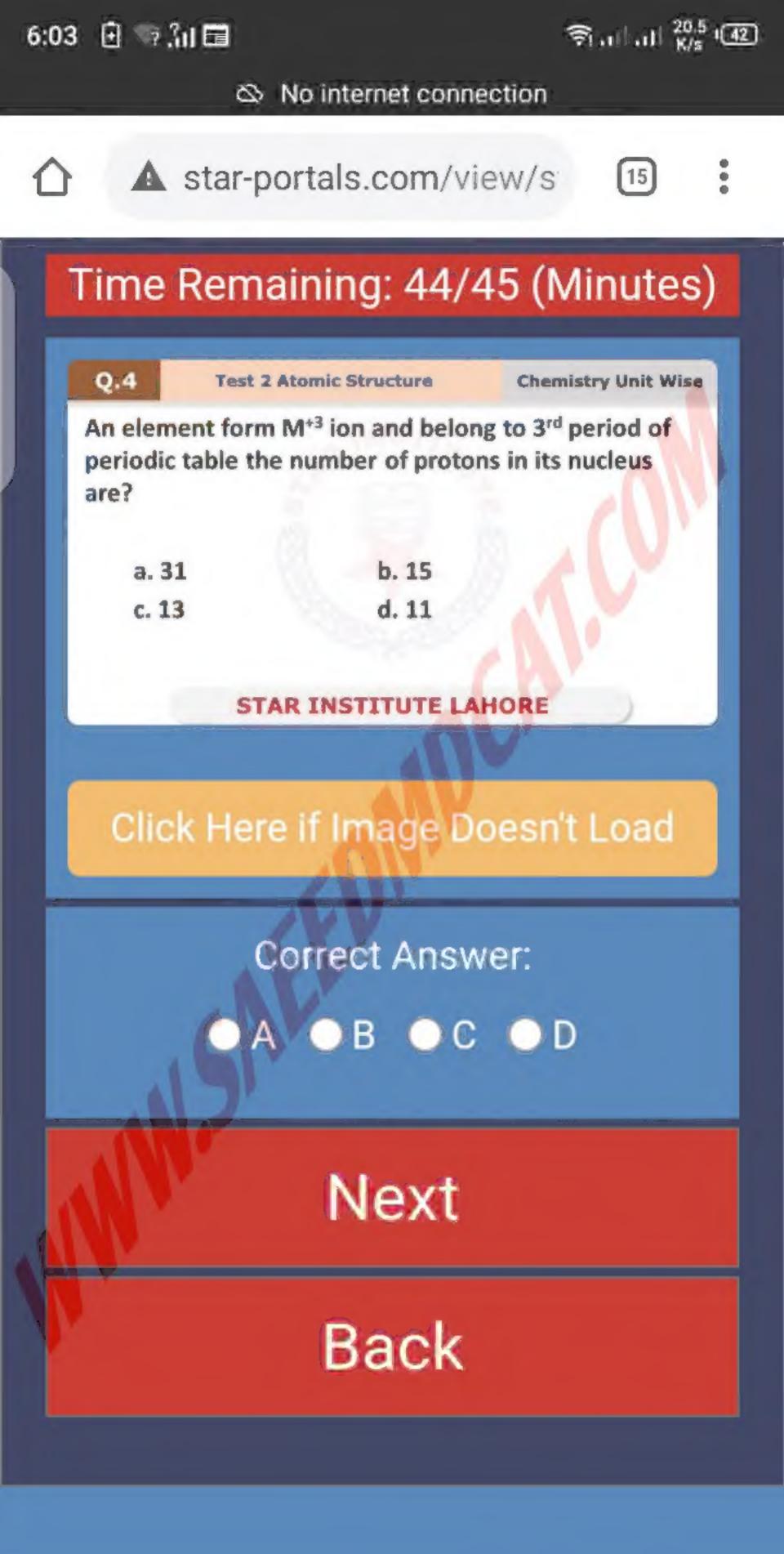
Ci

OA OB OC OD

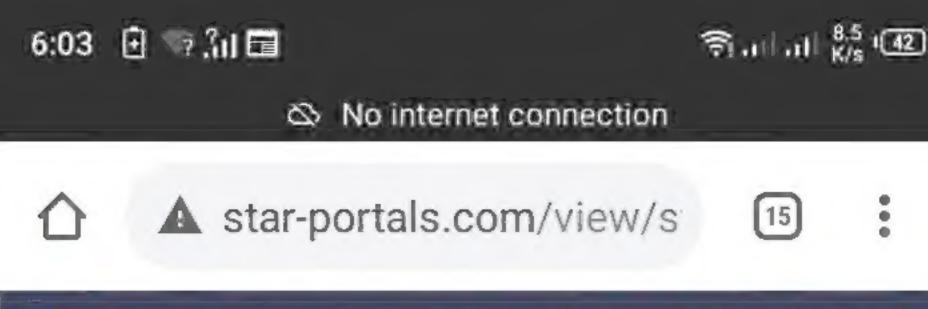
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Ci



Time Remaining: 44/45 (Minutes)

Q.5 **Test 2 Atomic Structure**

Chemistry Unit Wise

According to Aufbu's principal the highest energy orbital will be filled:

a. Immediately

b. initially

c. in the end

d. first

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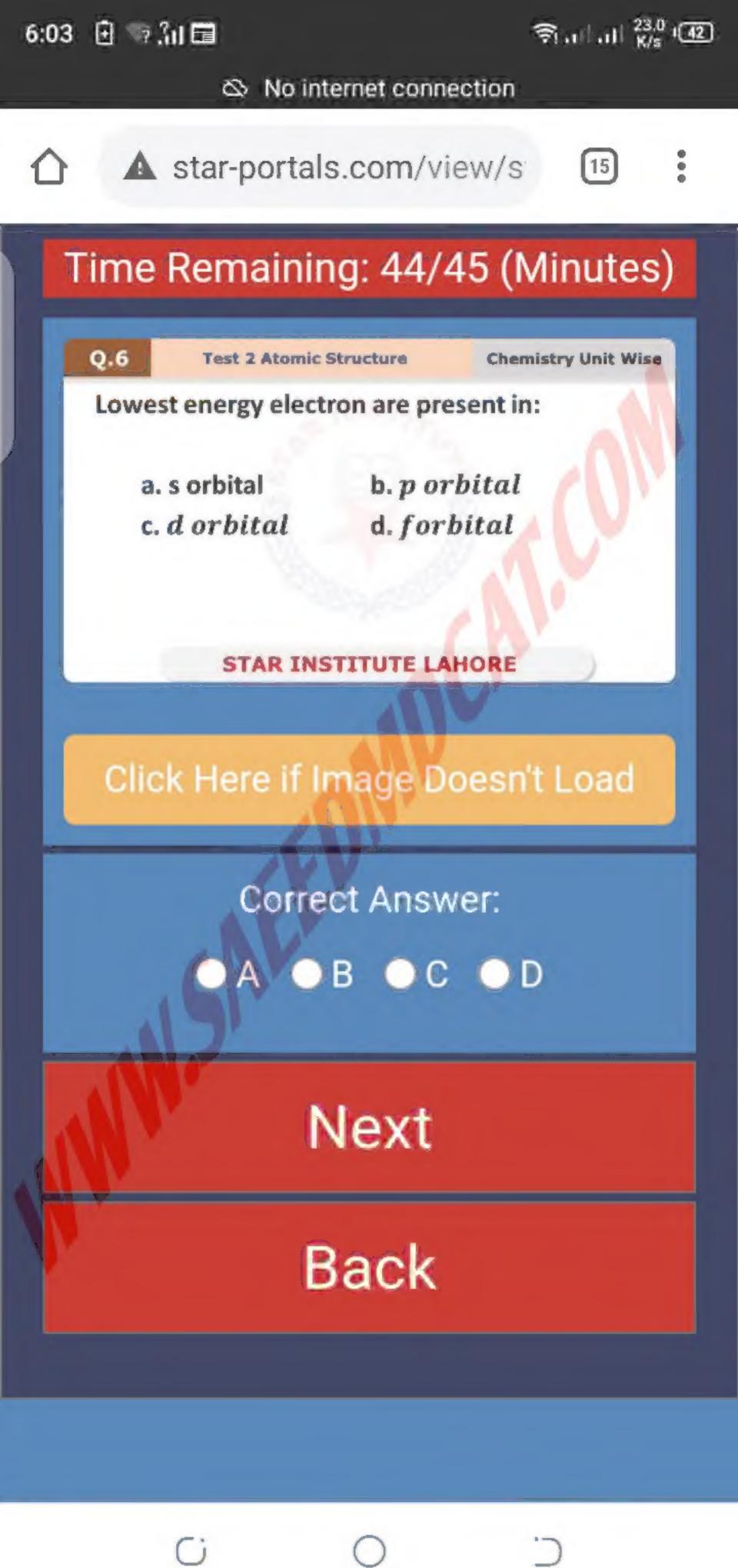
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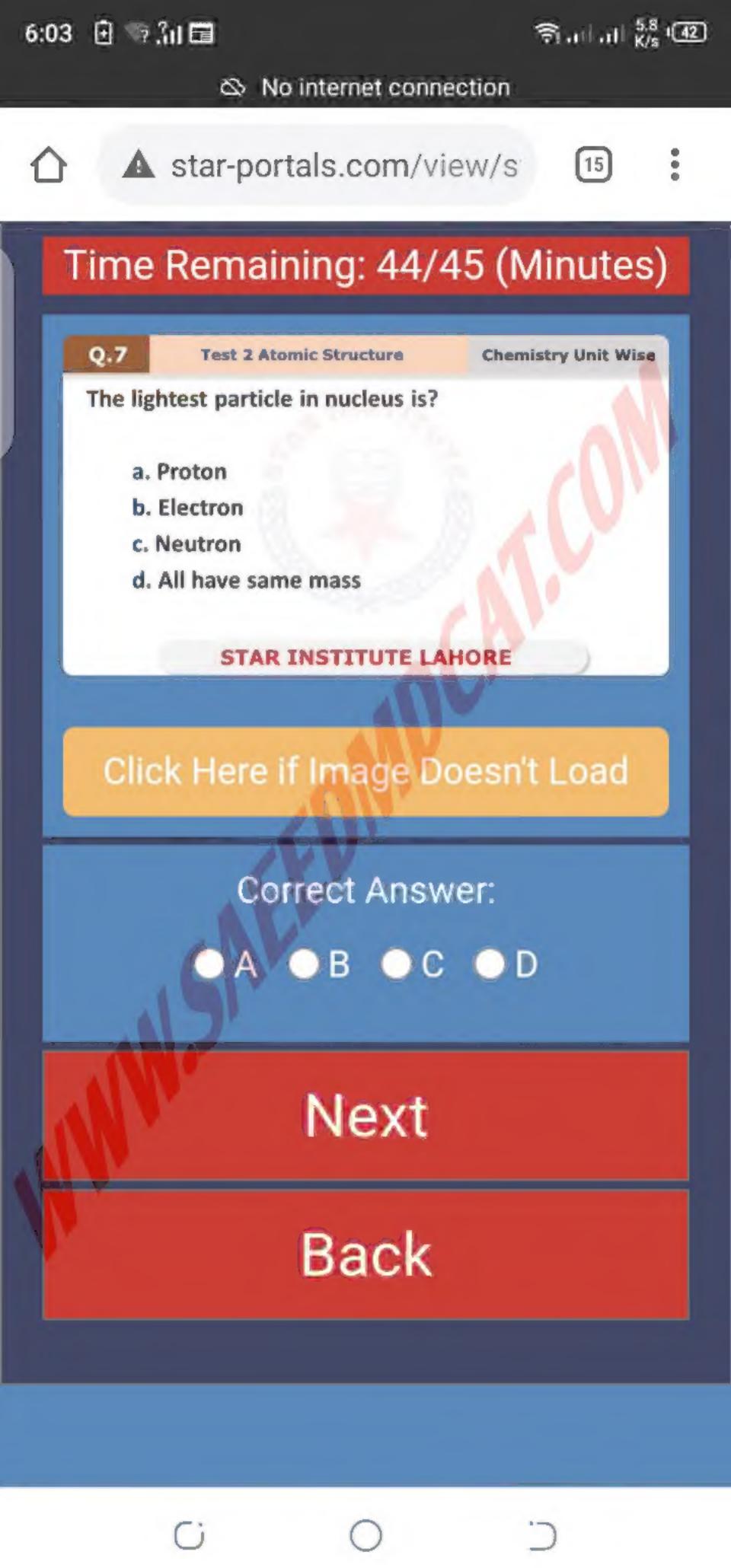
Correct Answer:

OA OB OC OD

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Time Remaining: 44/45 (Minutes)

Q.8

Test 2 Atomic Structure

Chemistry Unit Wise

All orbitals of a d-sub shell are represented with four lobes except:

a. dxy

b. d $x^2 - y^2$

 $c. dz^2$

d. dxz

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Correct Answer:



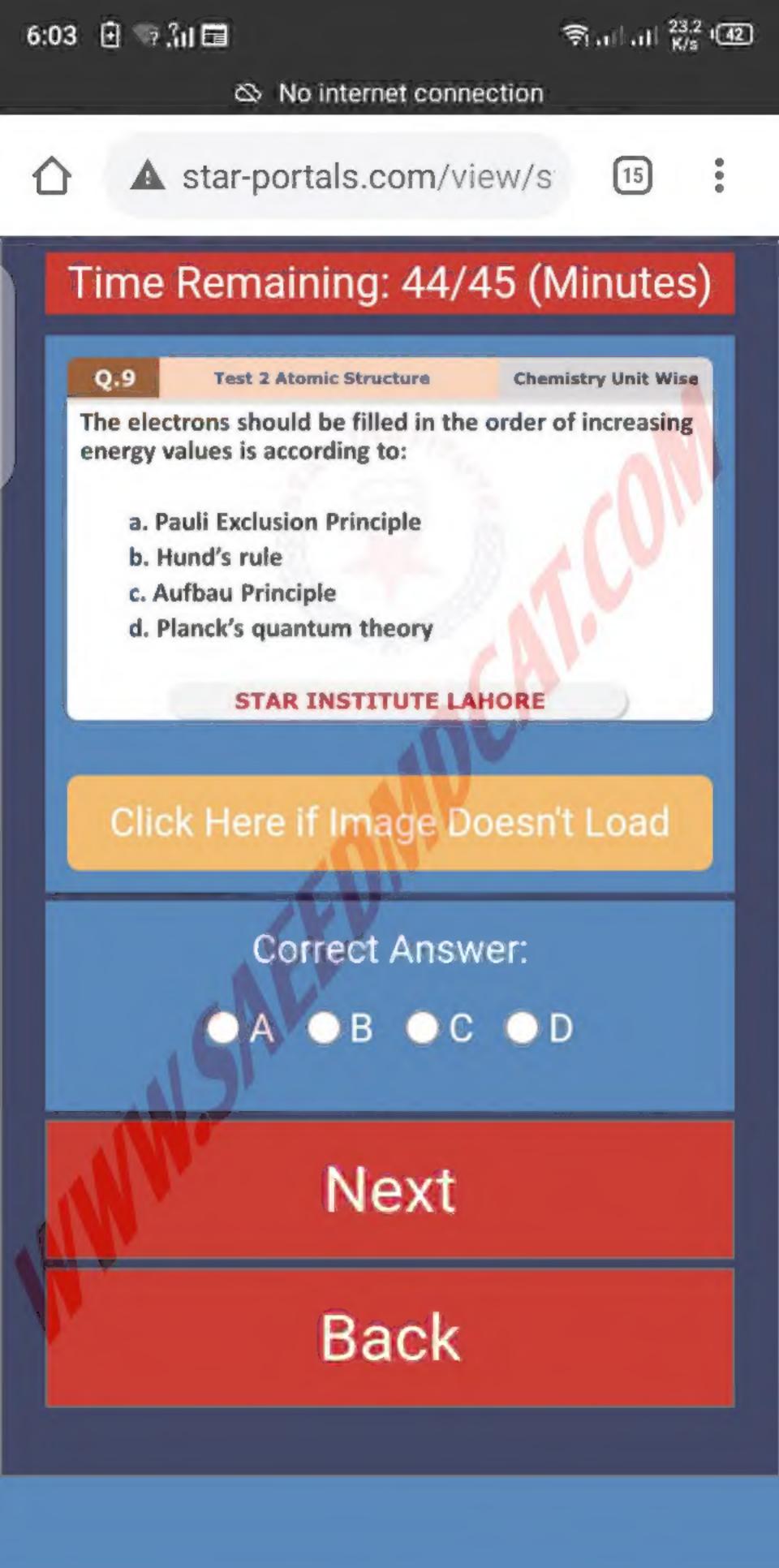
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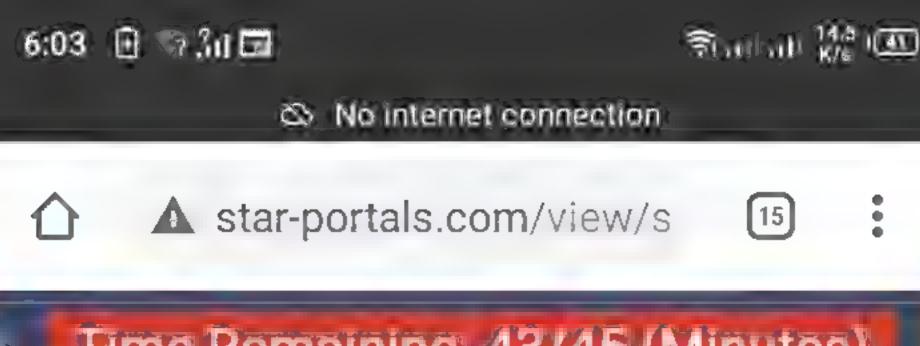


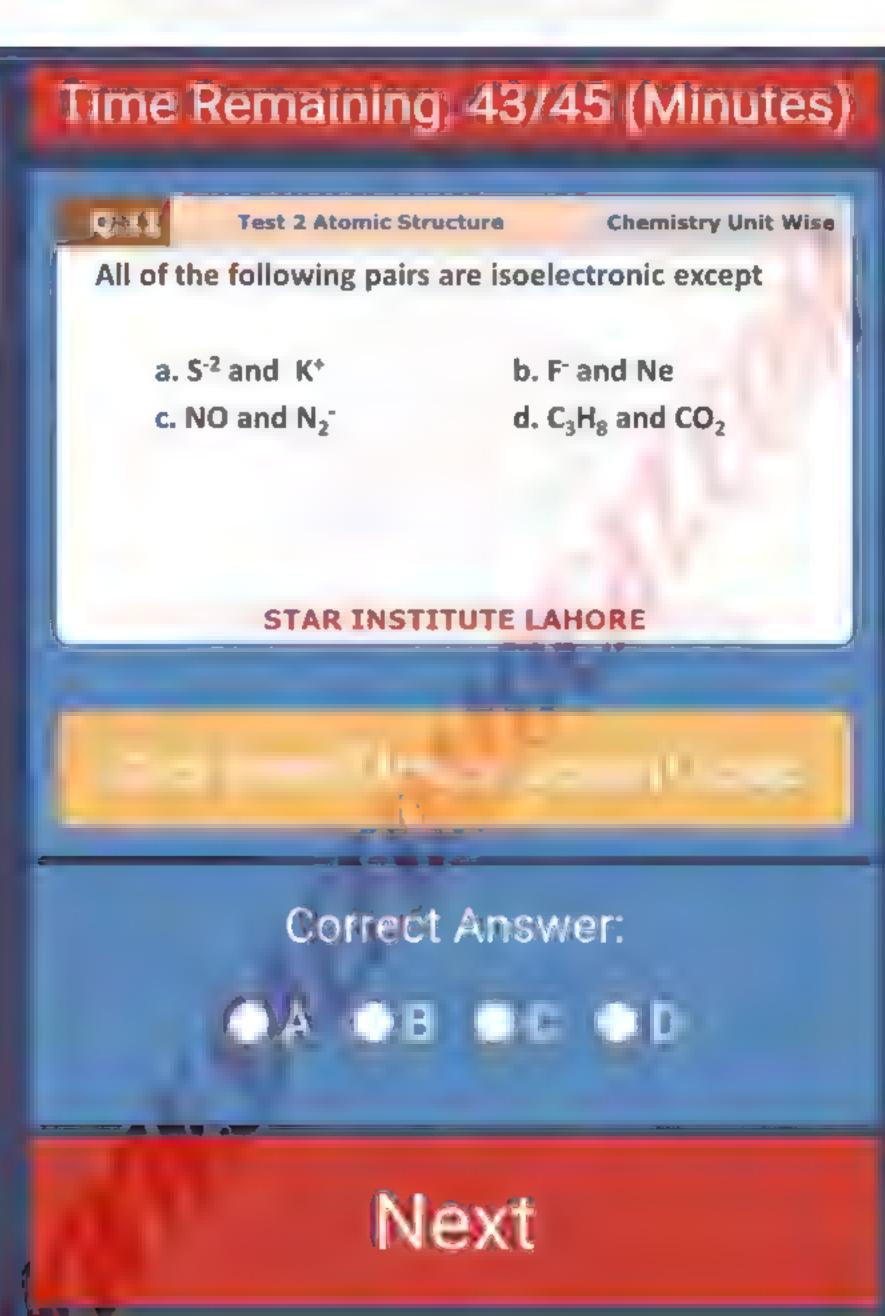
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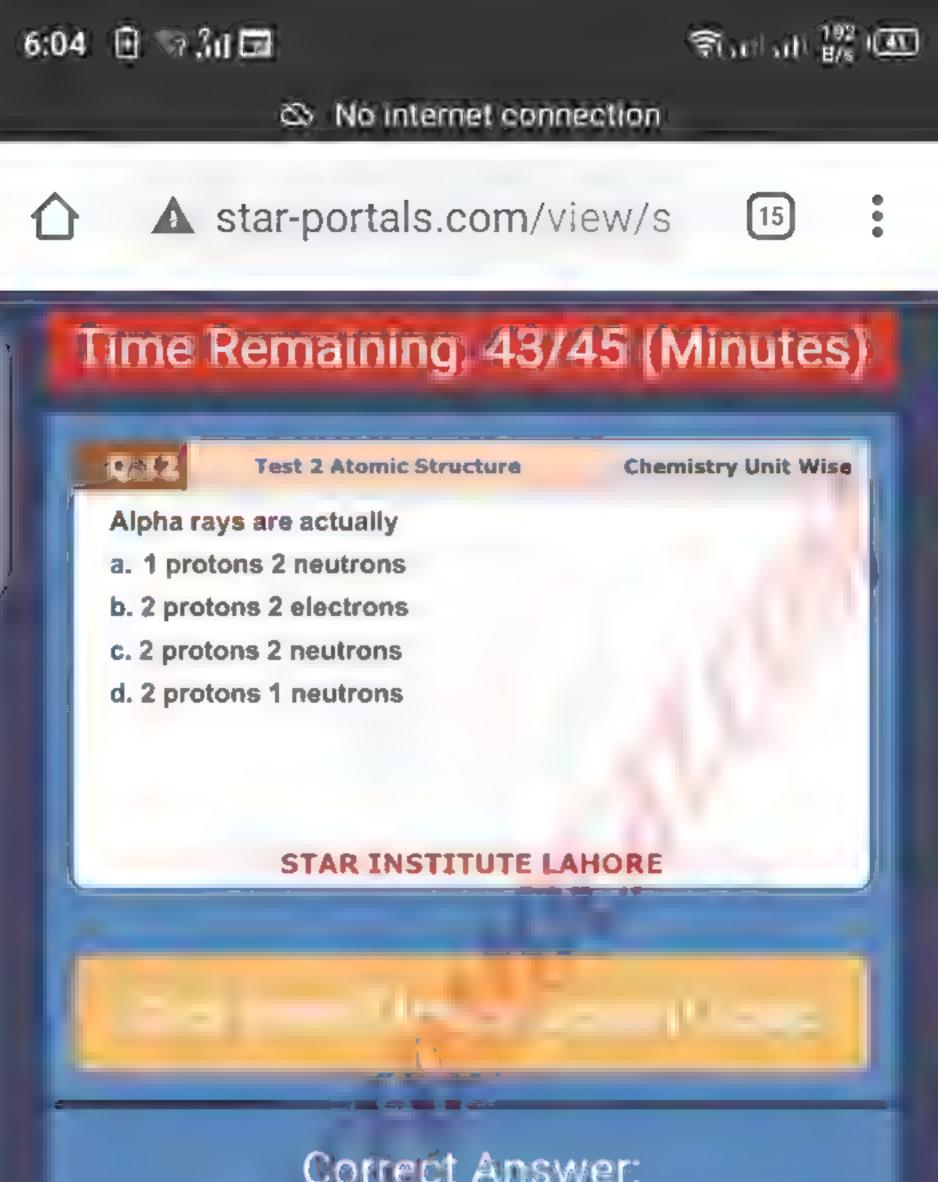






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Correct Answer:



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Test 2 Atomic Structure

Chemistry Unit Wise

The increasing penetration effect of atomic orbitals is:

- a. d<p<s<f b, p<s<d<f

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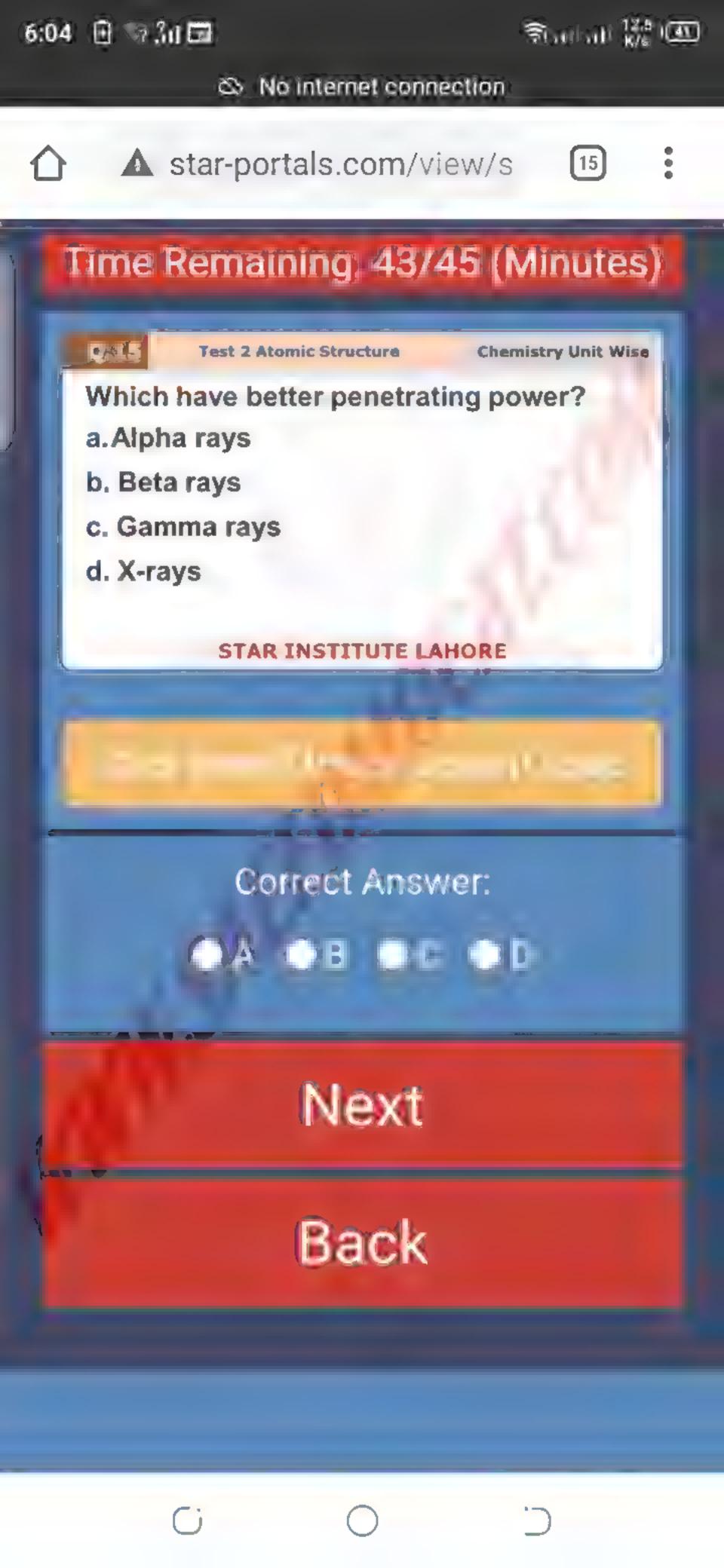
c. s<f<p<d d. f<d<p<s

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Correct Answer:

A OB OF OD

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Test 2 Atomic Structure

Chemistry Unit Wise

If n = 3, l = 1, m + 1, 0, -1 then orbital is:

a. 2s

b. 2p

c. 3p

d. 3d

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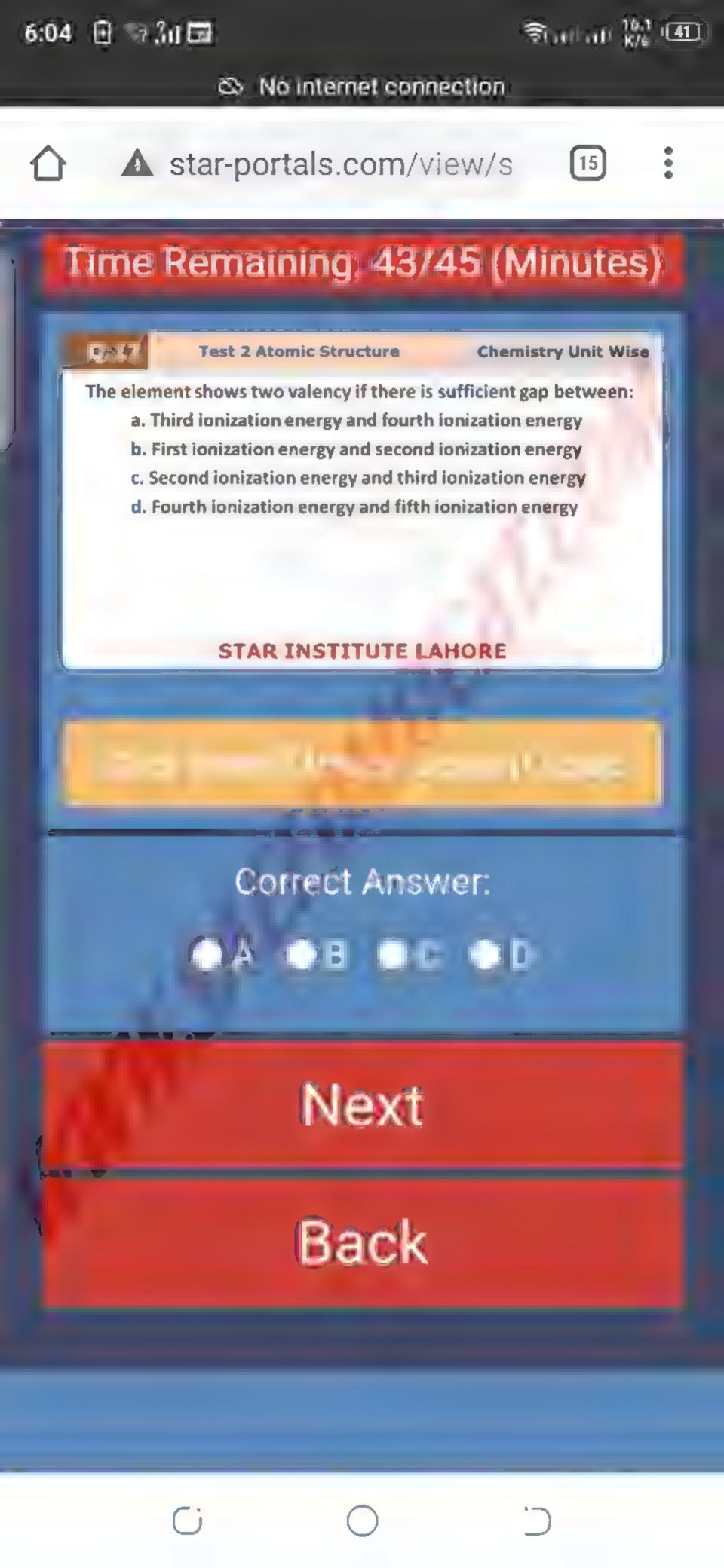
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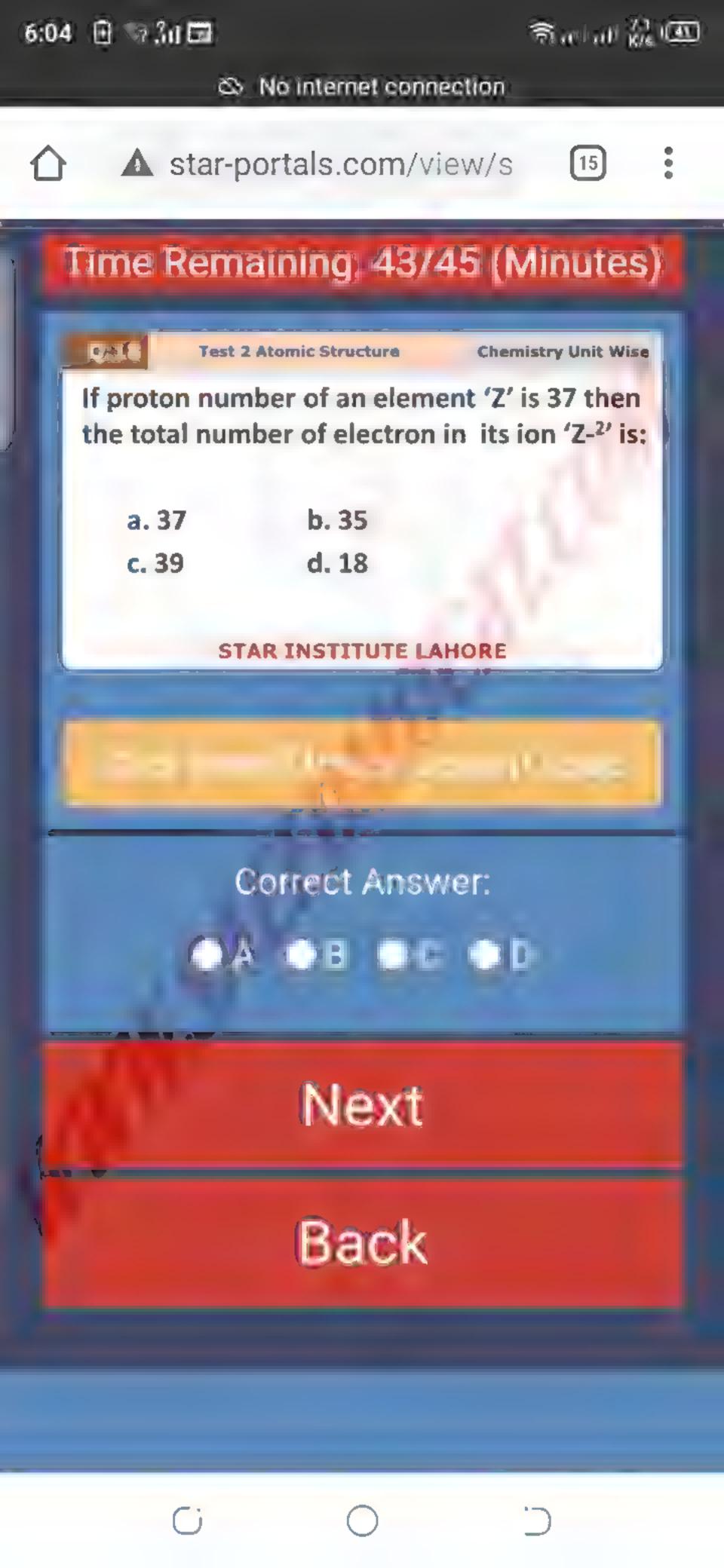
A OB OF OD

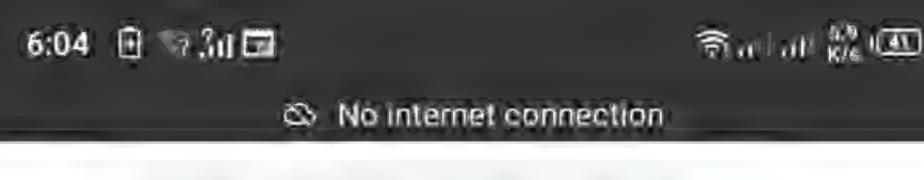
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Test 2 Atomic Structure

Chemistry Unit Wise

Which one of the following positive particles has maximum charge to mass ratio?

a. 0^{+}

b. Na+

c. K^+

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d. H+

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Correct Answer:

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Time Remaining 43/45 (Minutes)

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Test 2 Atomic Structure

Chemistry Unit Wise

The charge one kilogram electron:

a. 1.602×10^{-19} C b. 1.75×10^{11} C

c. 9.1×10^{-31}

G

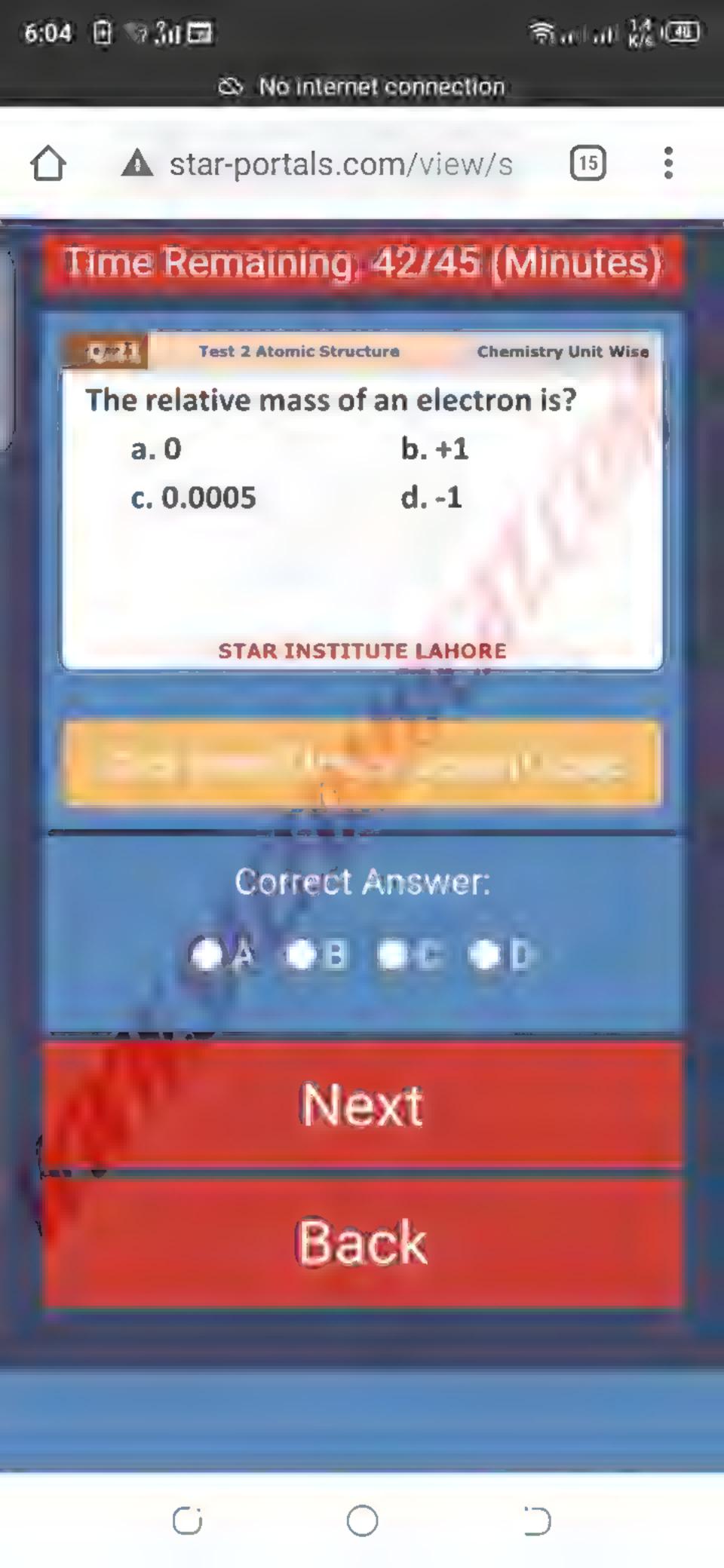
d. 1.661×10^{-24}

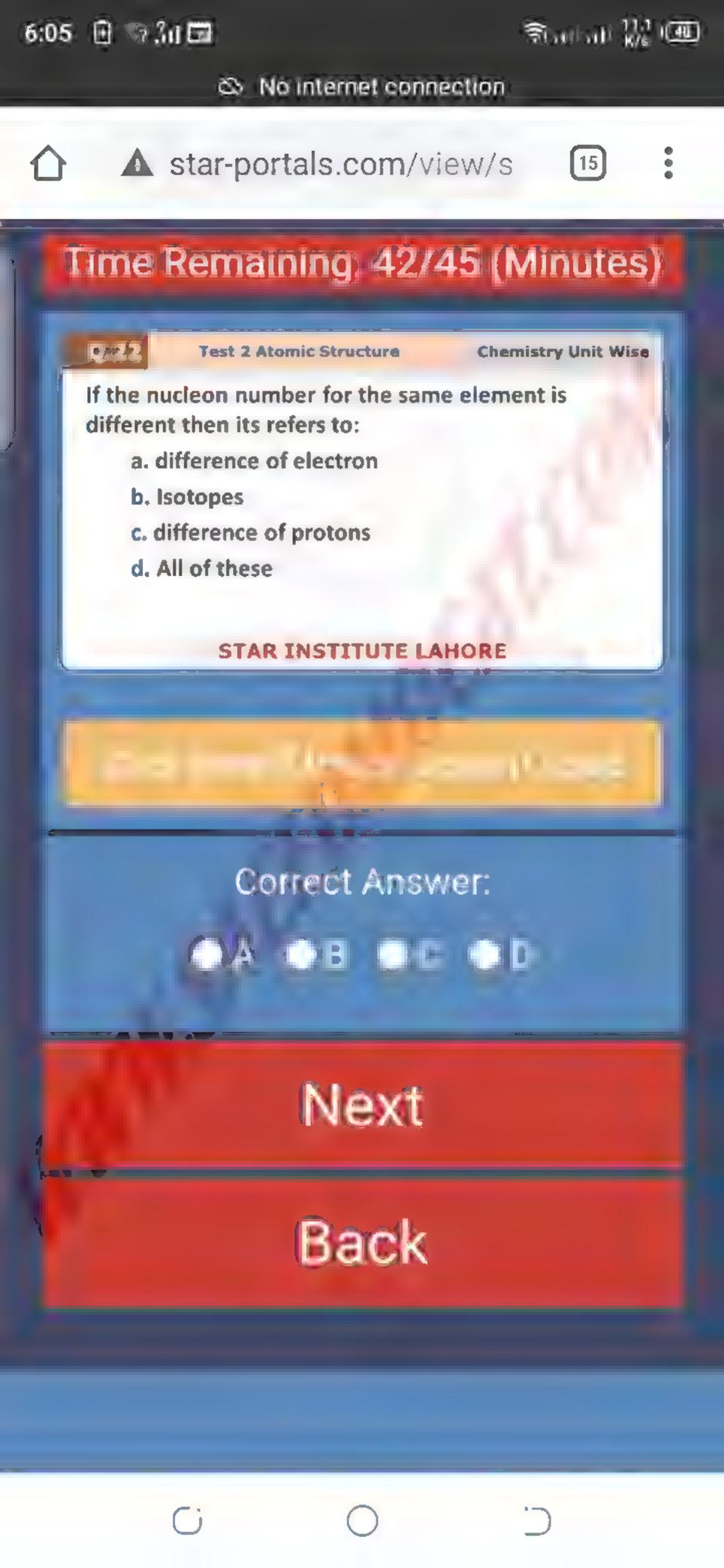
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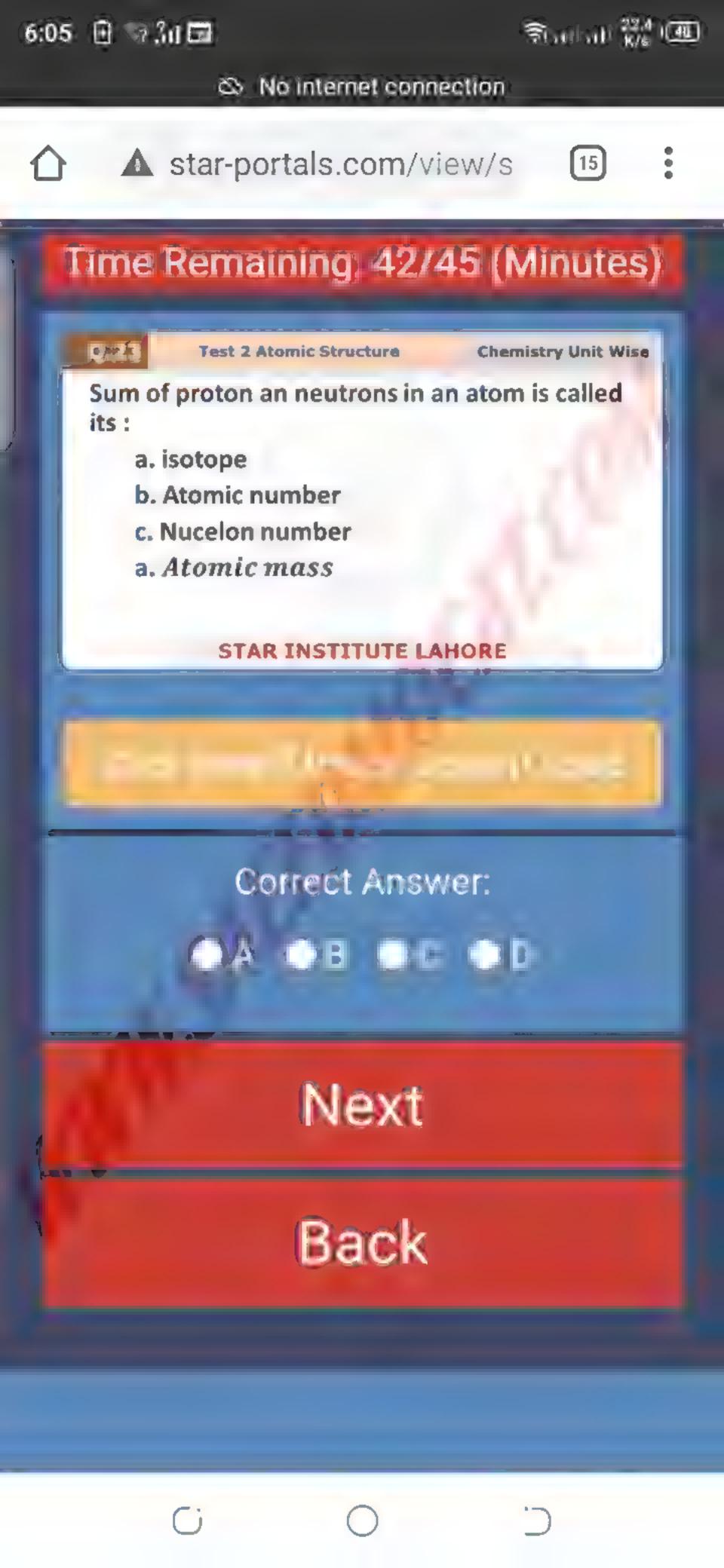
Correct Answer:

A OB OF OD

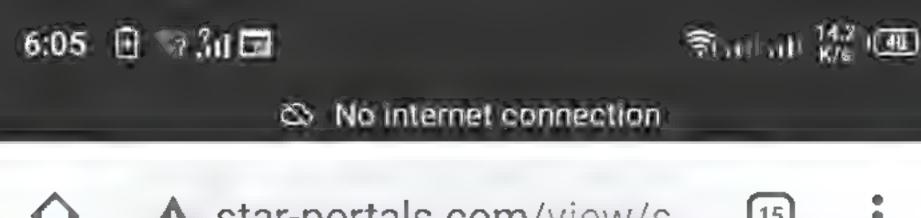
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Test 2 Atomic Structure

Chemistry Unit Wise

A set of orbitals having same value of 'l' is called:

a. Shell

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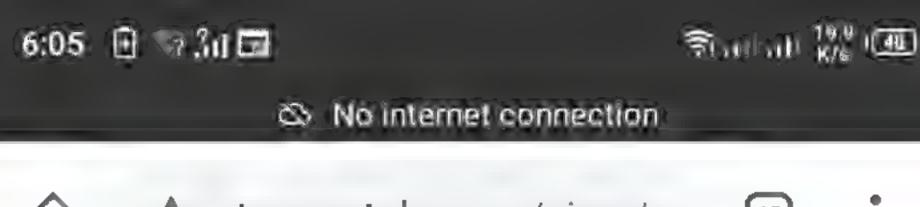
- b. Sub-shell
- c. molecular orbital
- d. Energy level

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Correct Answer:

A OB OF OD

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Time Remaining 42/45 (Minutes)



Test 2 Atomic Structure

Chemistry Unit Wise

Which one of the following rule is used to arrange the sub energy levels in increasing order of energy?

- a. Hund's rule
- c. Octet rule

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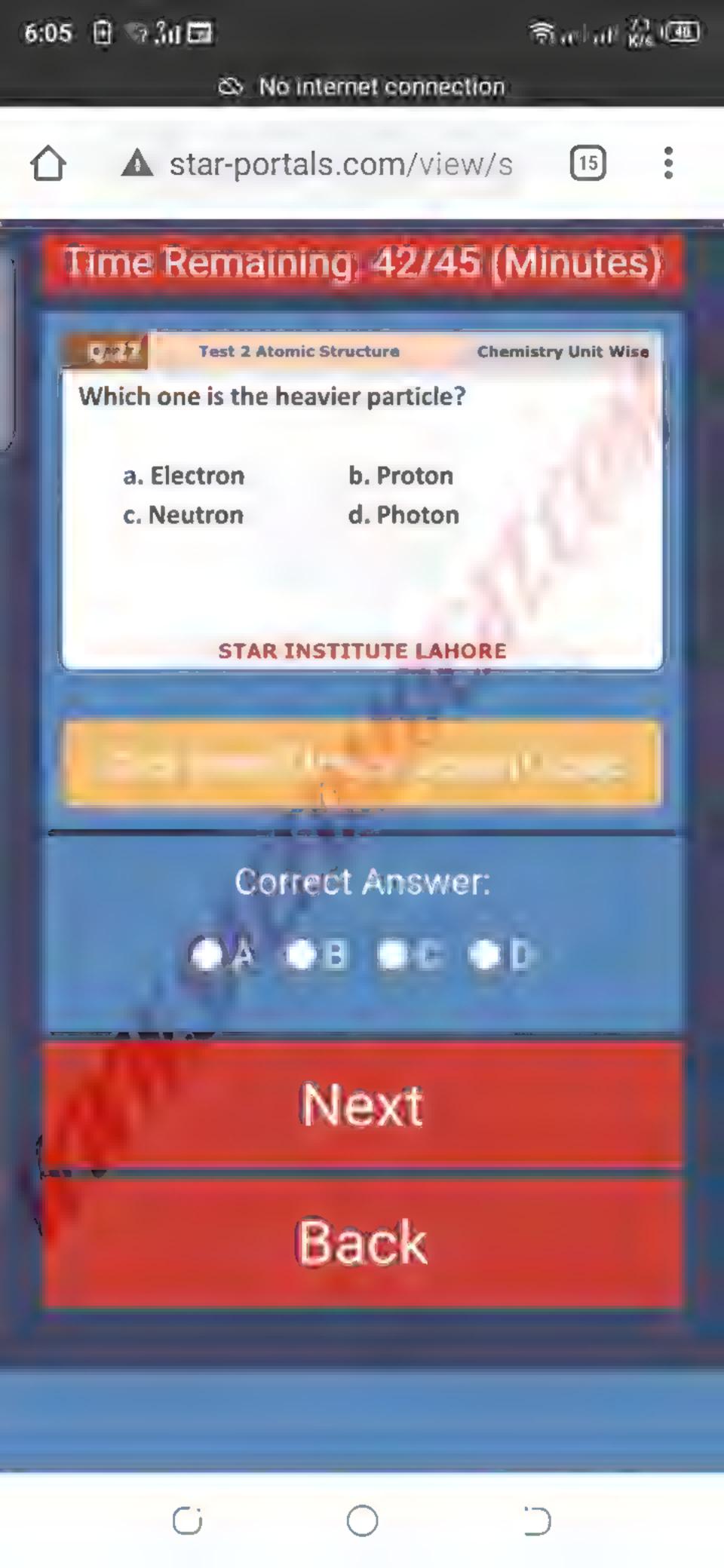
- b. (n+ℓ) rule
- d. Auf bau principle

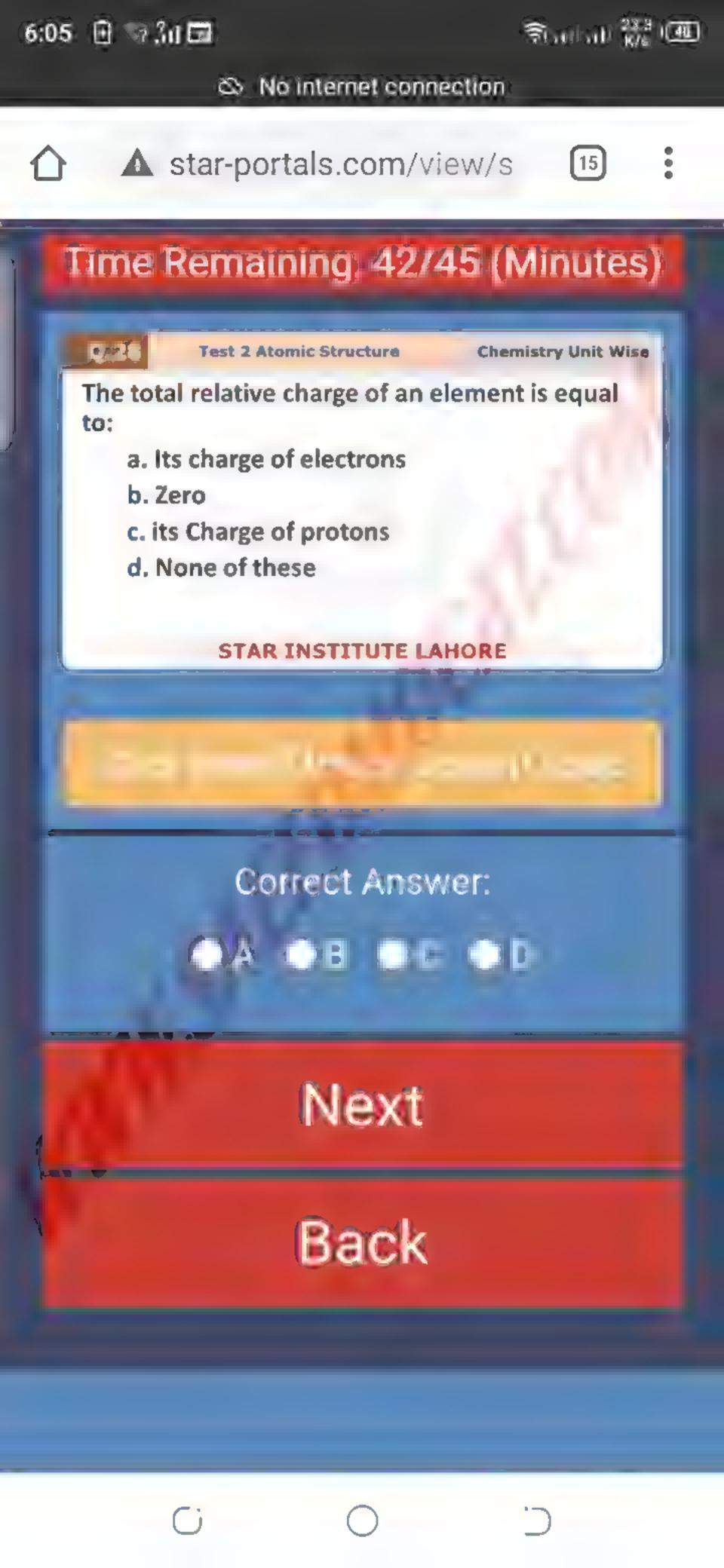
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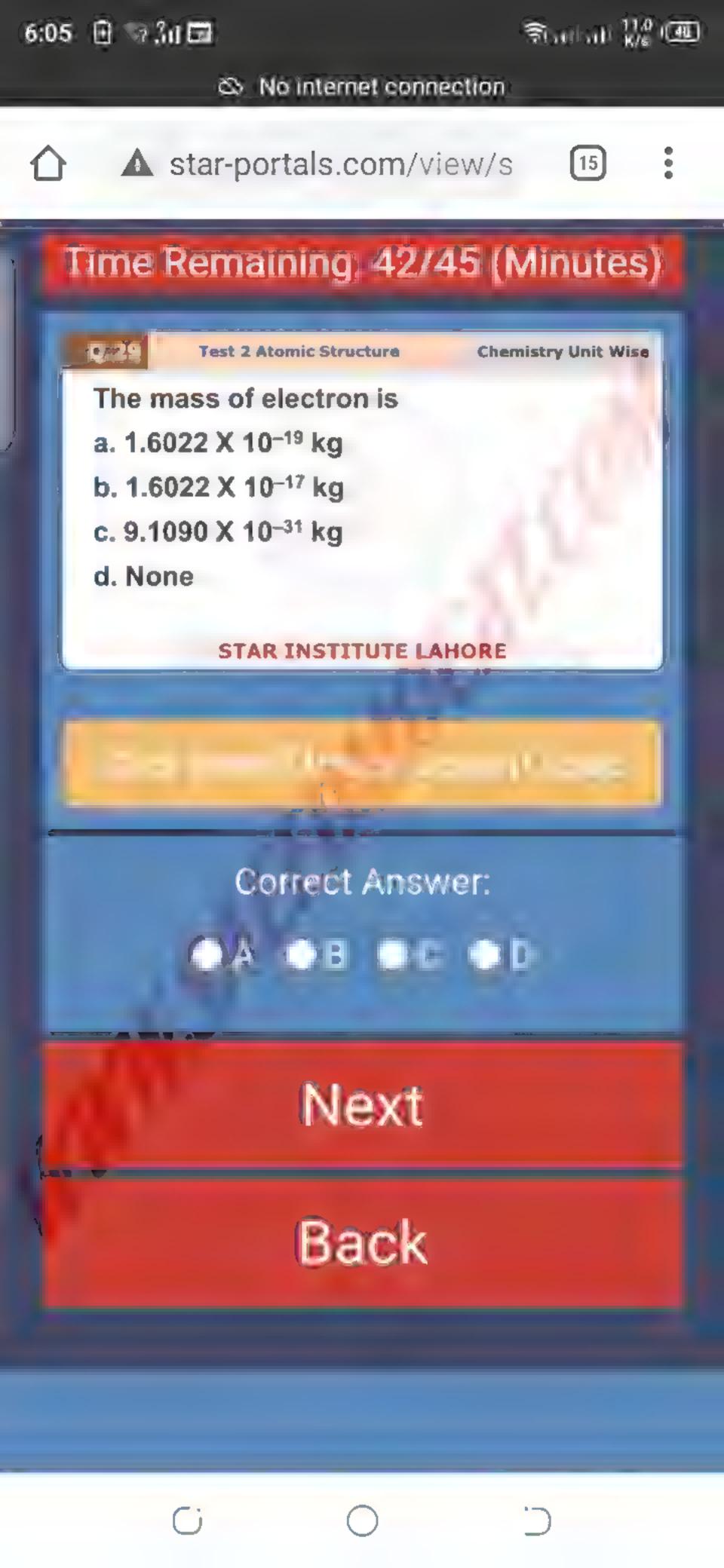
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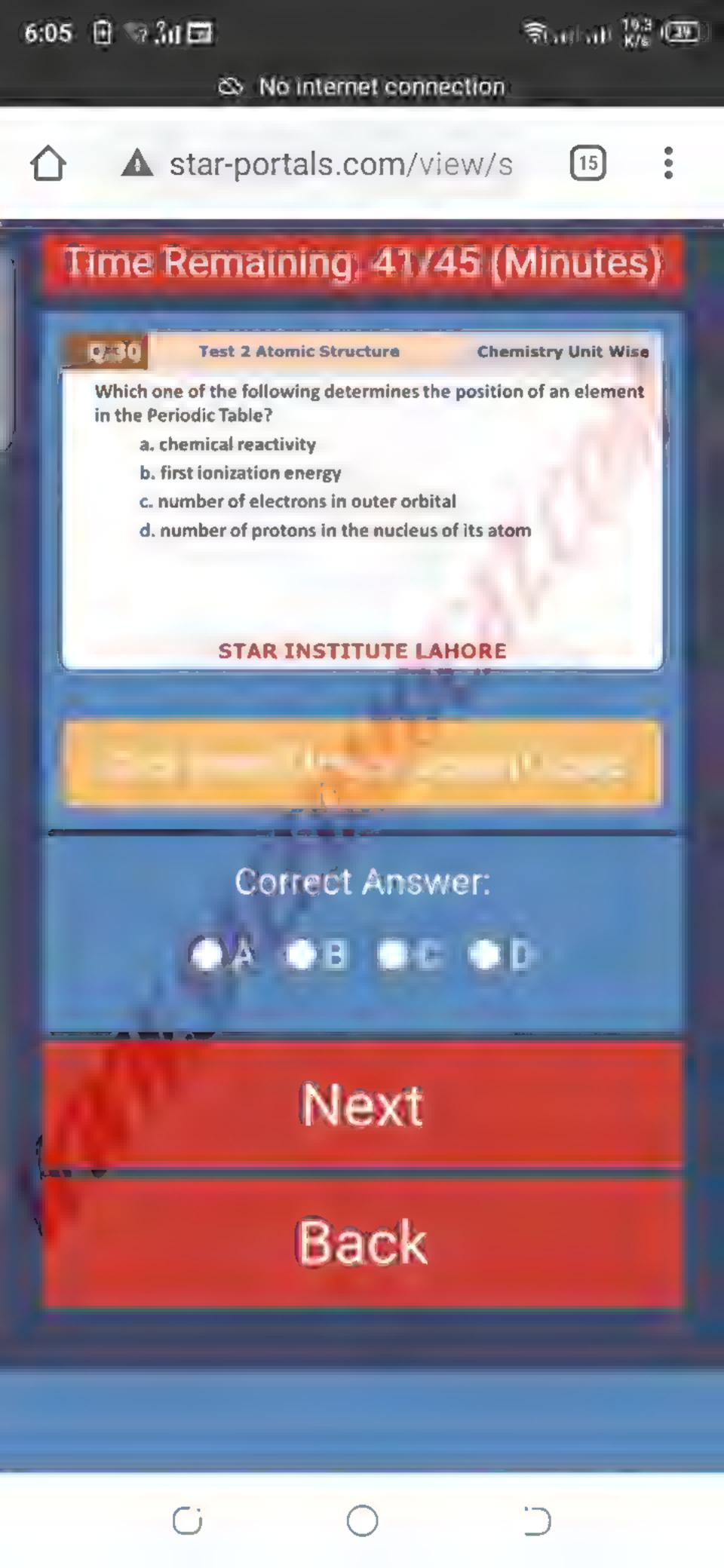
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Test 2 Atomic Structure

Chemistry Unit Wise

An element with 4p⁴ valence electronic configuration will have period and group no. in modern periodic table?

- a. 4 and IV
- b. 4 and III
- c. 4 and VI

G

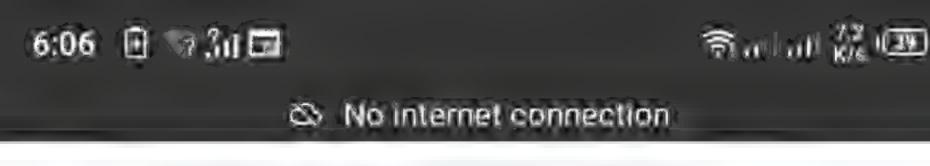
d. 4 and V

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Correct Answer:

OA OB OF OD

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Time Remaining 41/45 (Minutes)

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Test 2 Atomic Structure

Chemistry Unit Wise

Which one of the following are Isosteres?

- a. H-1 and H
- b. N₂ and CO
- c. 6C12 and 8O16
- d. 18 Ar 20 and 20 Ca 40

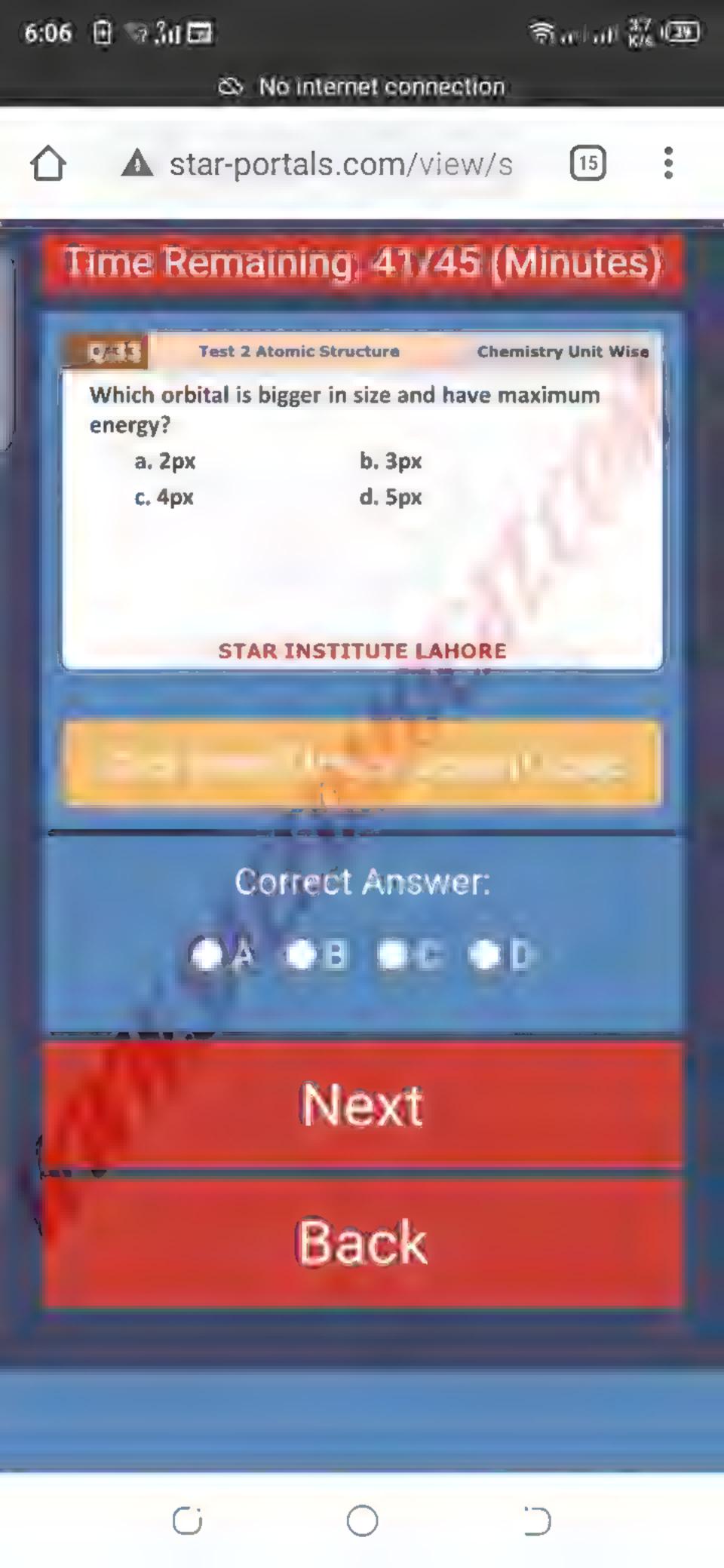
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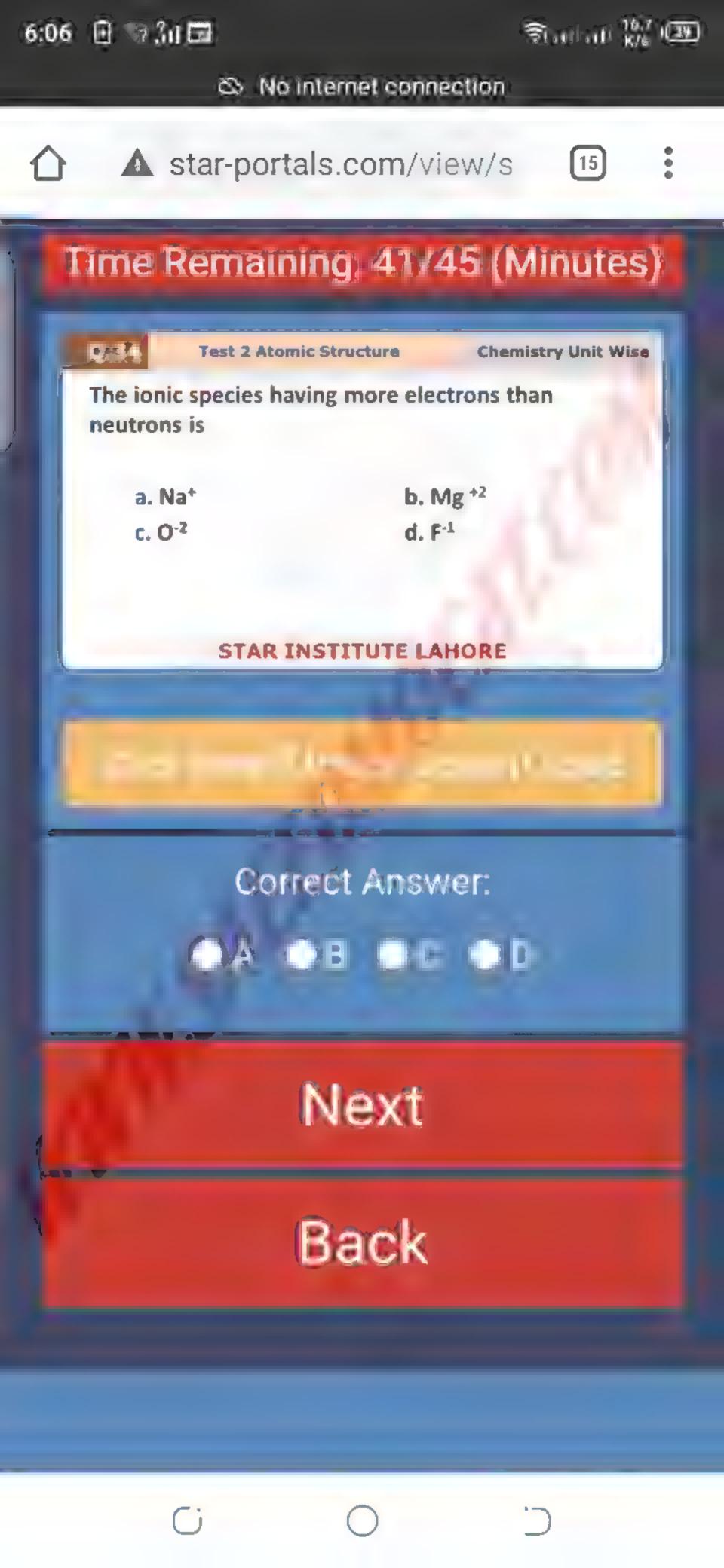
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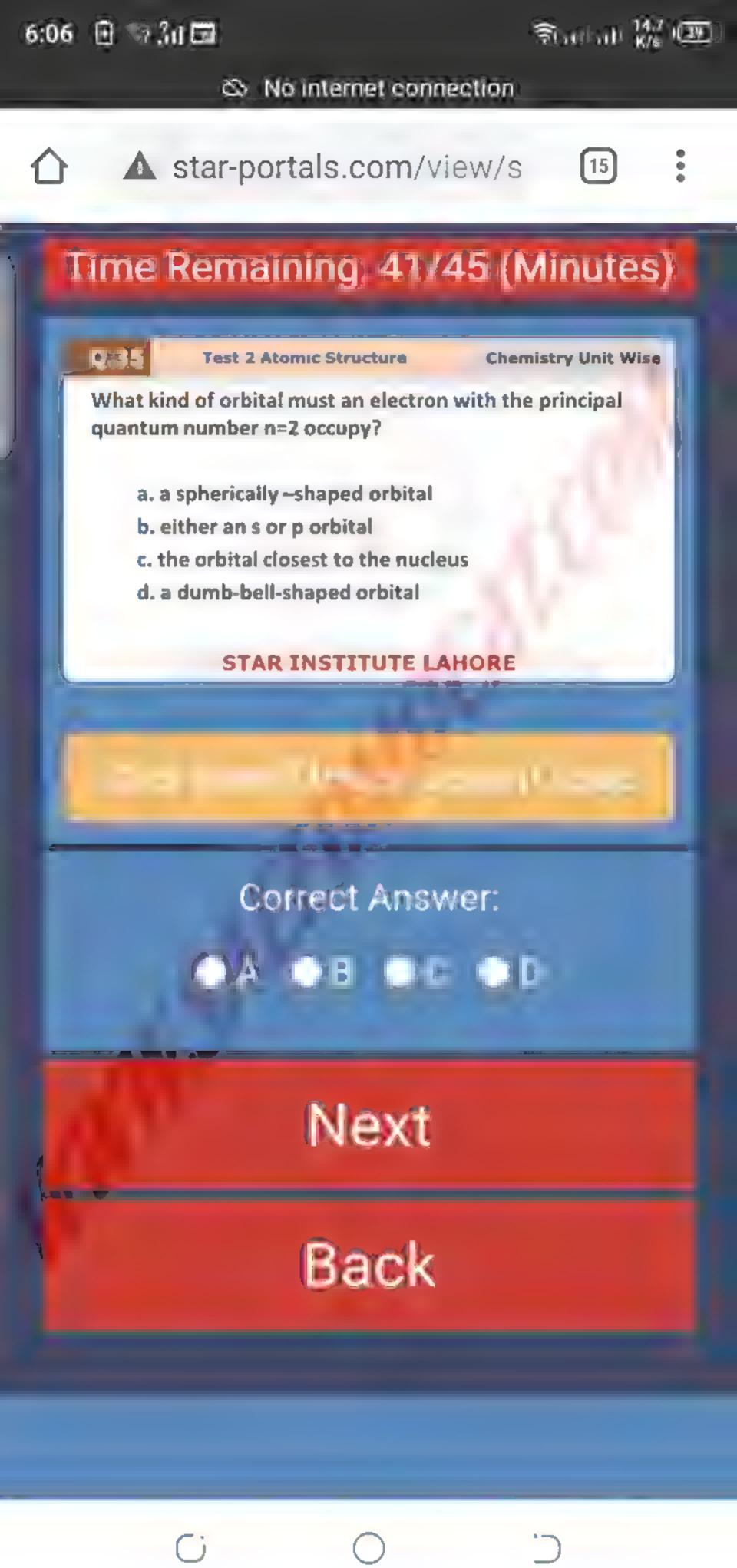
Correct Answer:

OA OB OF OD

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Time Remaining 41/45 (Minutes)



Test 2 Atomic Structure

Chemistry Unit Wise

Which property is the same for the two nuclides $\frac{40}{18}$ Ar and $\frac{40}{19}$ K?

- a, the number of electrons
- b. the number of neutrons
- c. the number of nucleons
- d. the number of protons

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Correct Answer:

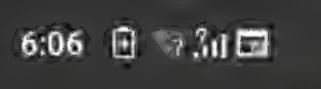
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Time Remaining 41/45 (Minutes)

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Test 2 Atomic Structure

Chemistry Unit Wise

Atomic number of an element is 17. The number of pairs of paired and also unpaired electrons in the valence shell of atom is:

a. 1, 3

b. 3, 1

c. 2, 2

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d. 4, 1

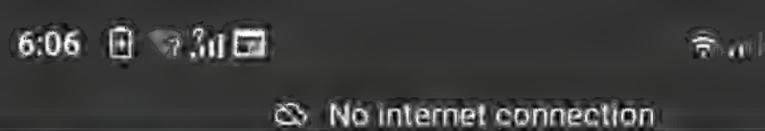
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Correct Answer:

OA OB OF TO

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Time Remaining 40/45 (Minutes)

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Test 2 Atomic Structure

Chemistry Unit Wise

The correct set of quantum number for unpaired electron in sodium atom is:

m

a.2 0 0

b.3 0 0

c.2 1 1

d.3 0 1

G

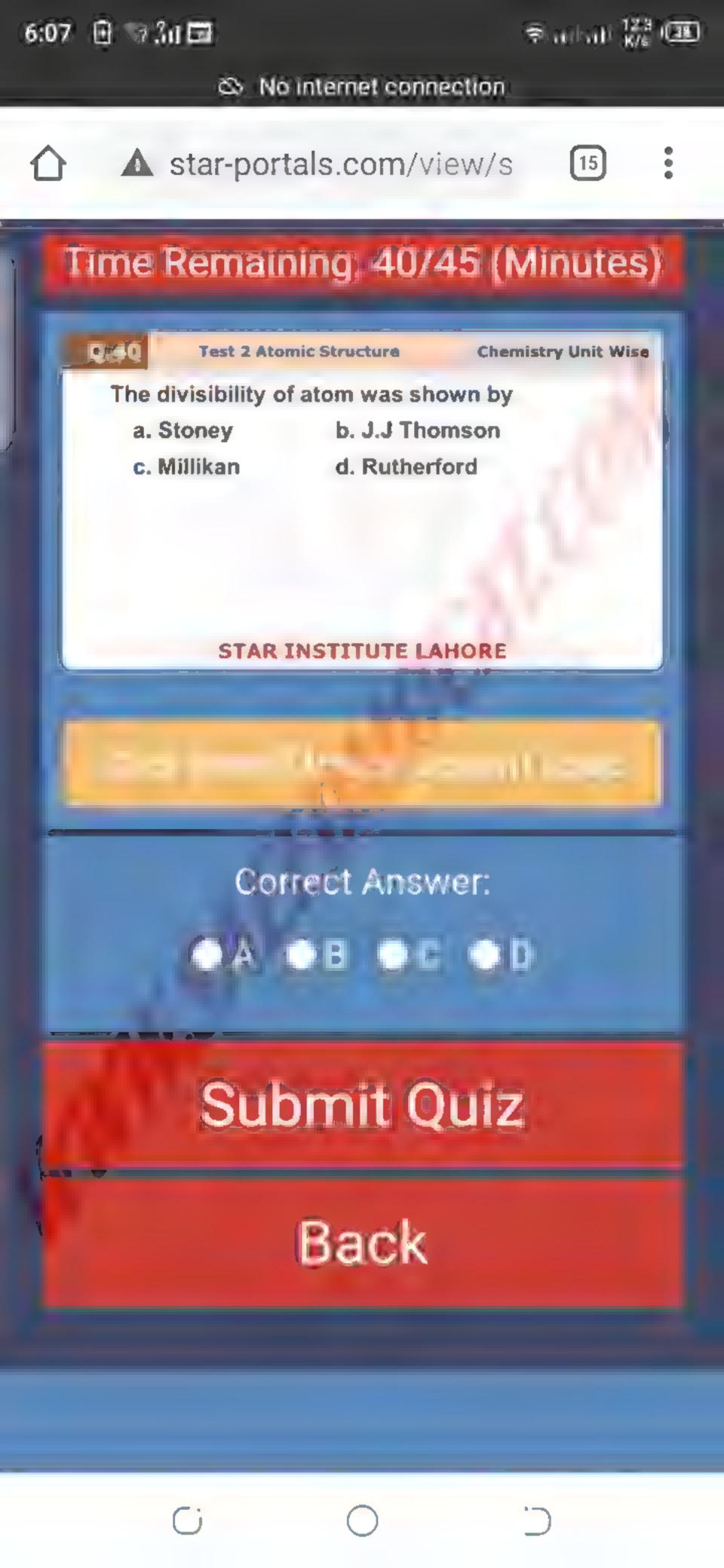
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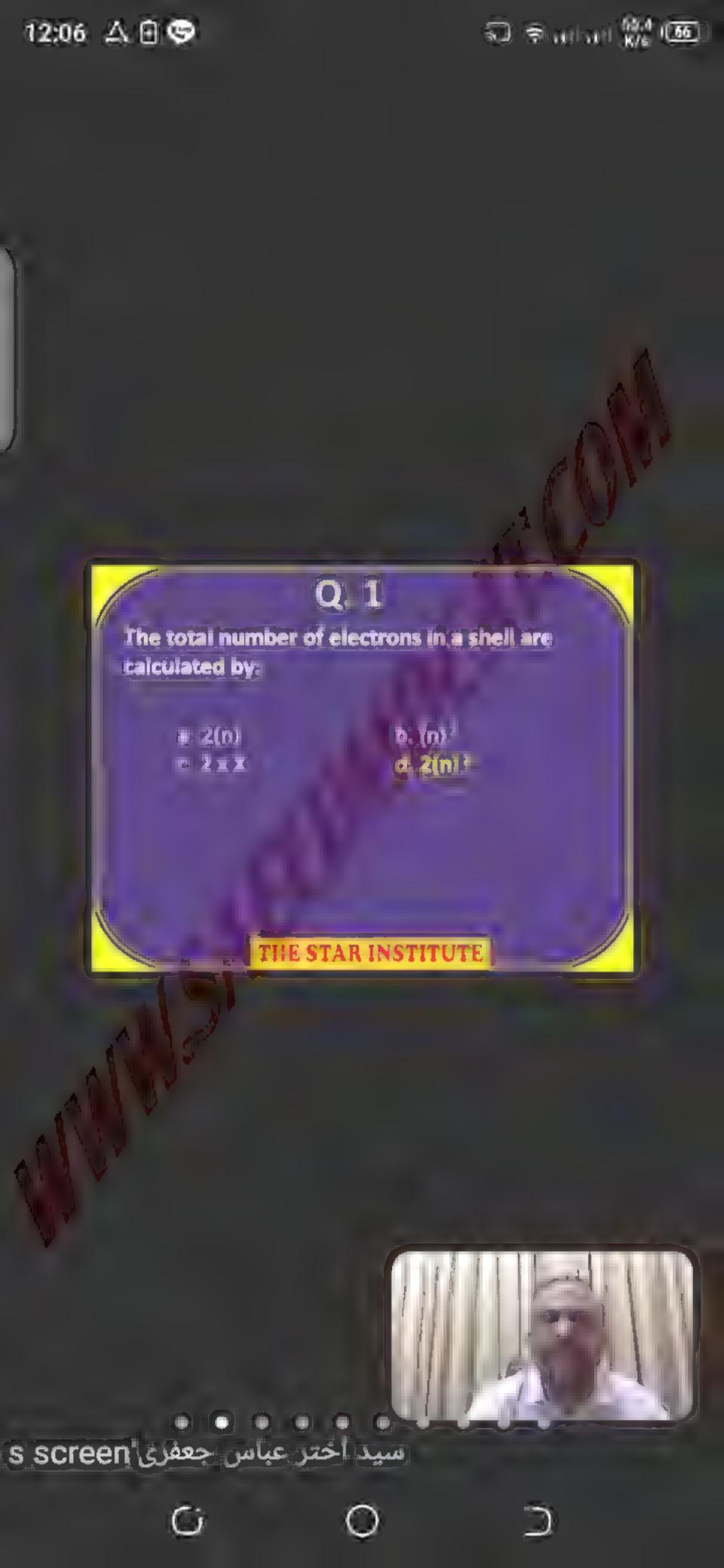
Correct Answer:

A OB OF OD

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If the value of I = 3 then the electron is located in ____ shell?

a. K

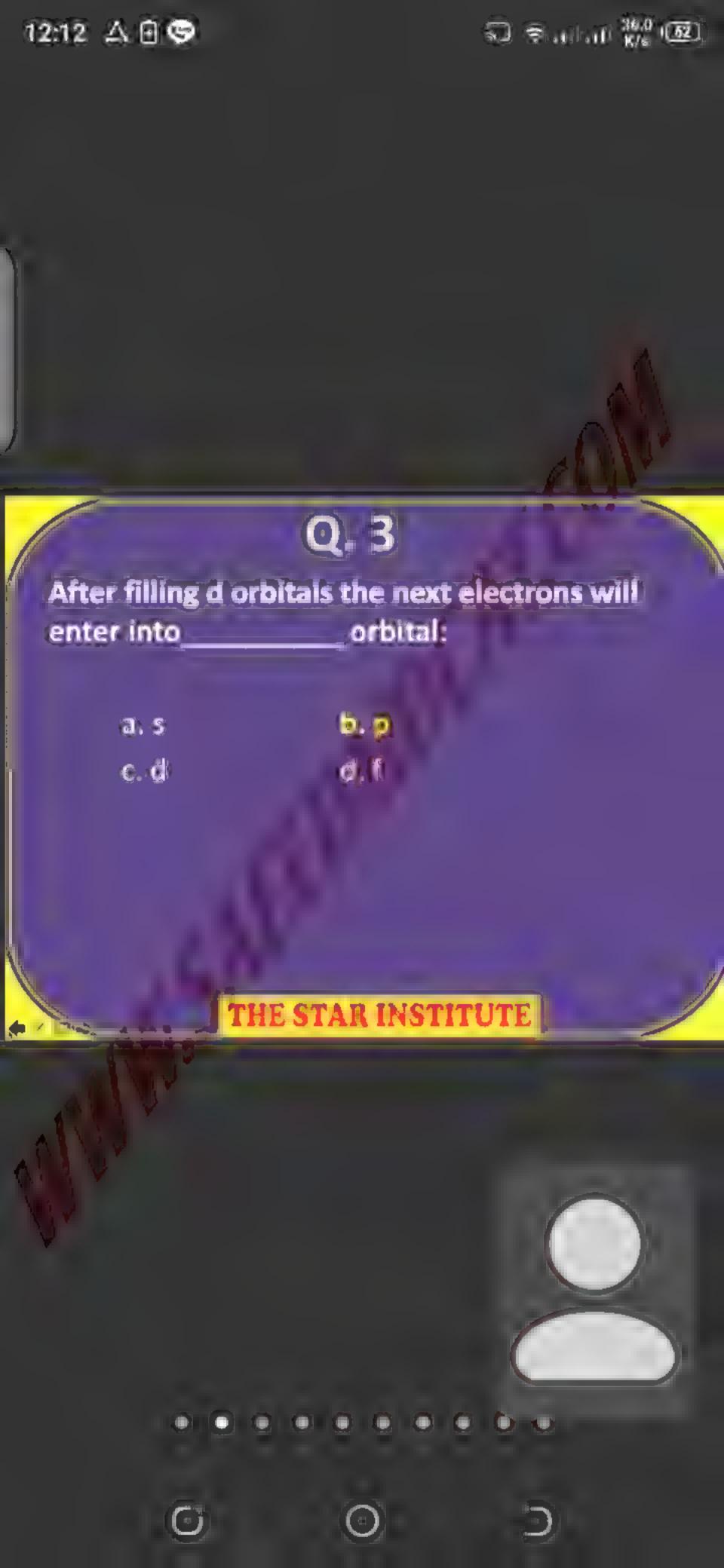
b. M

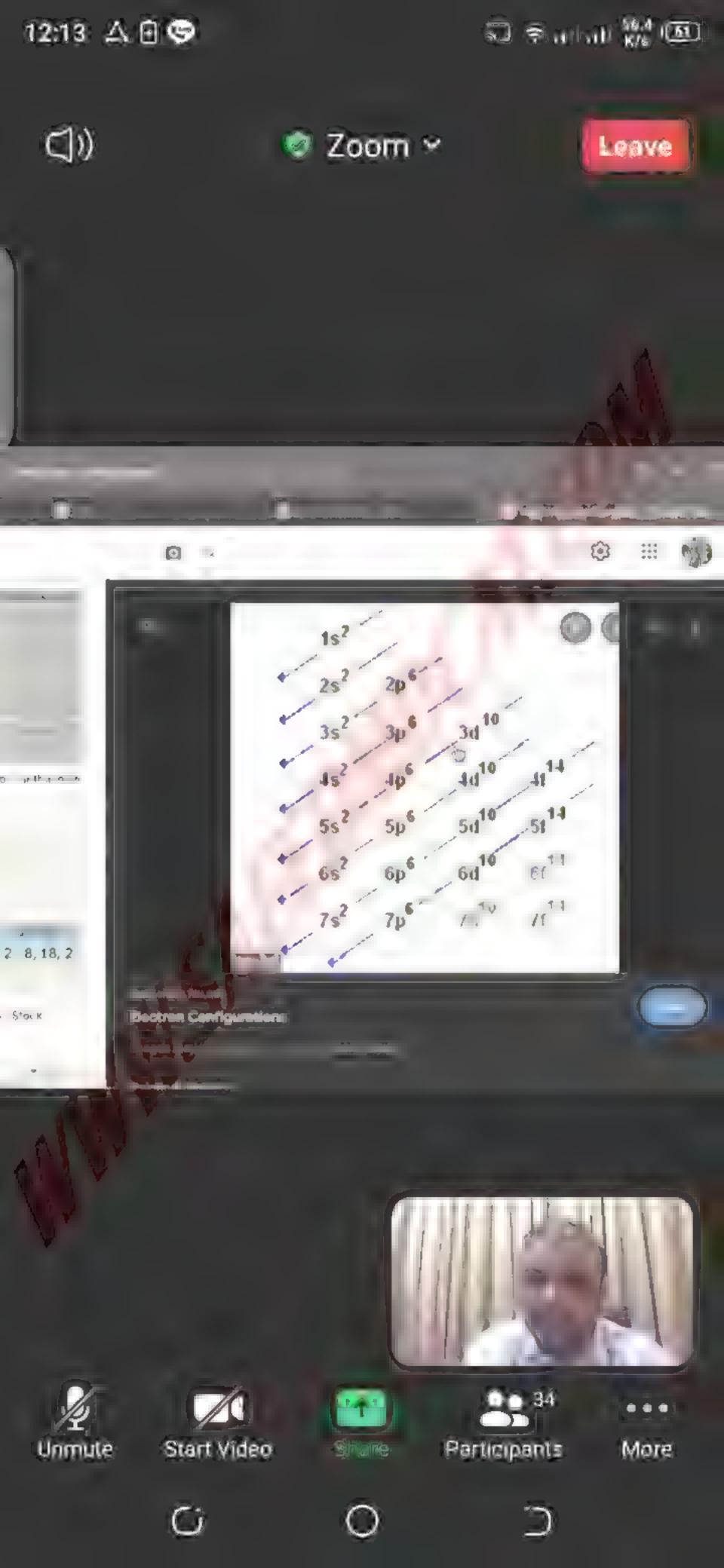
G. (N)

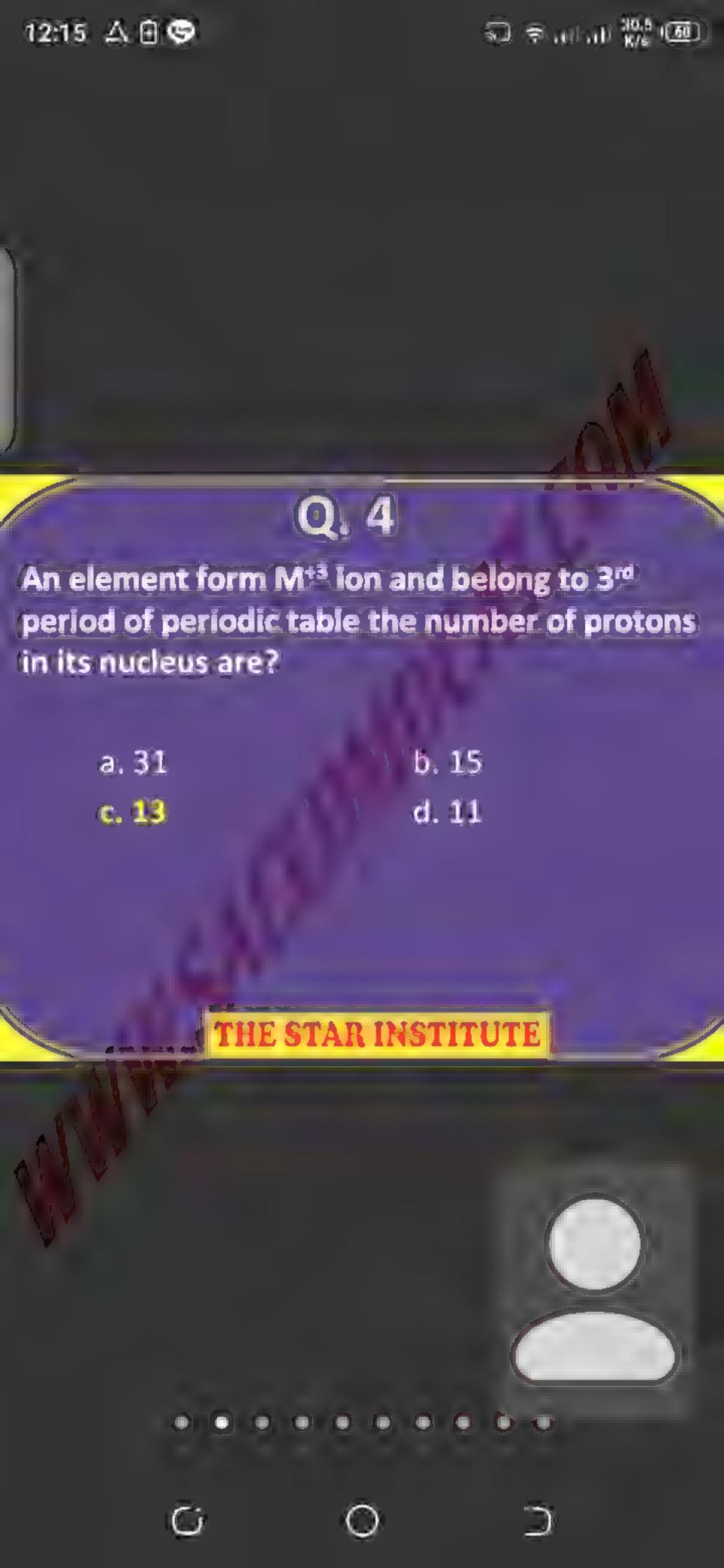
d.L

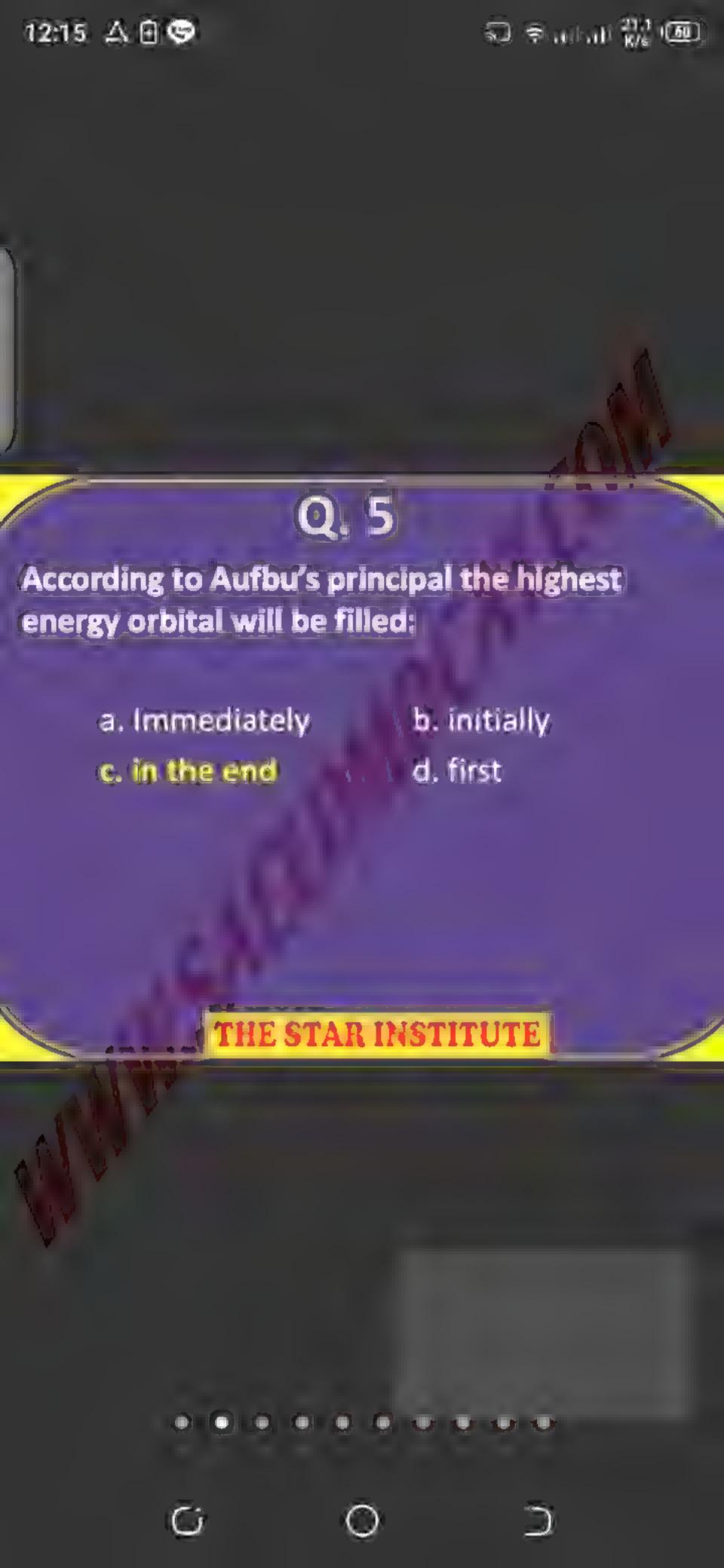
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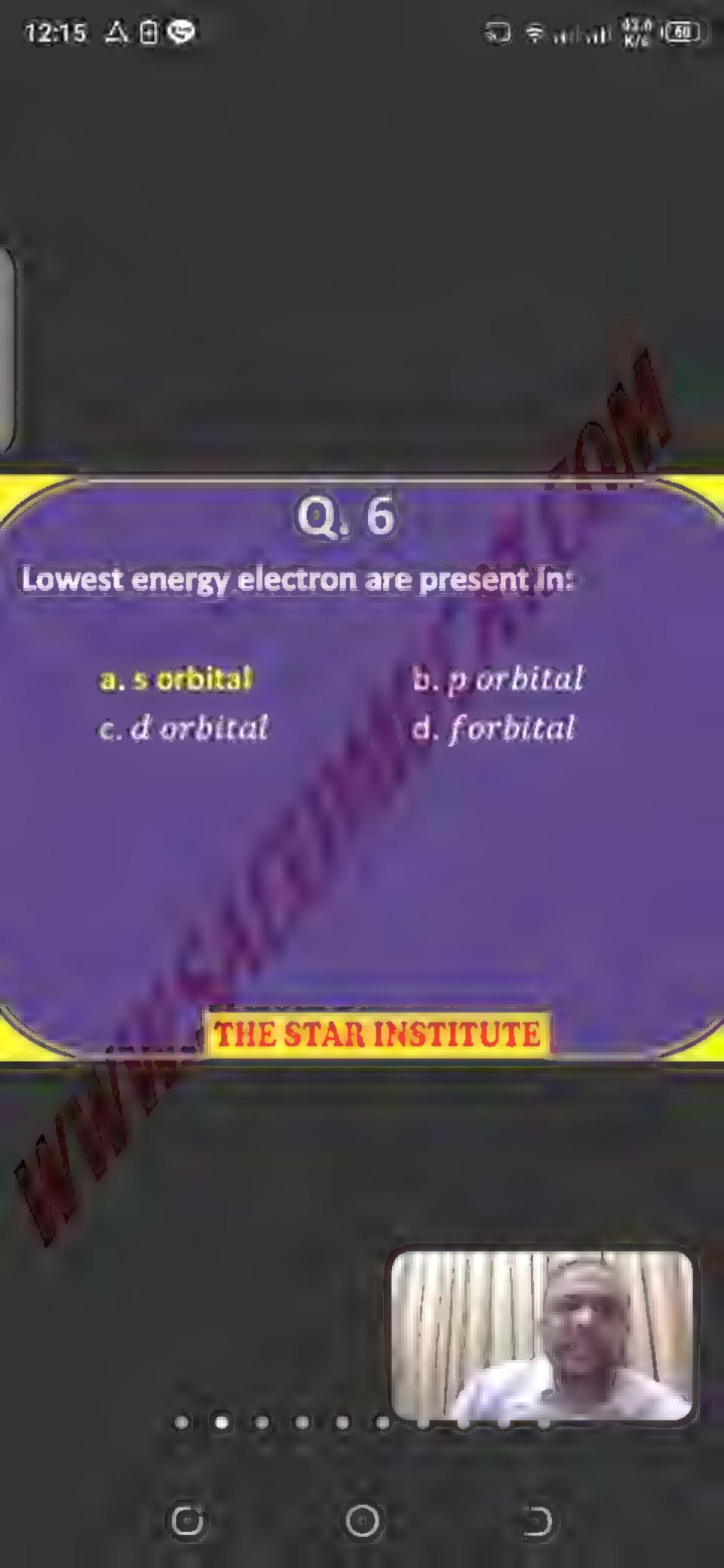
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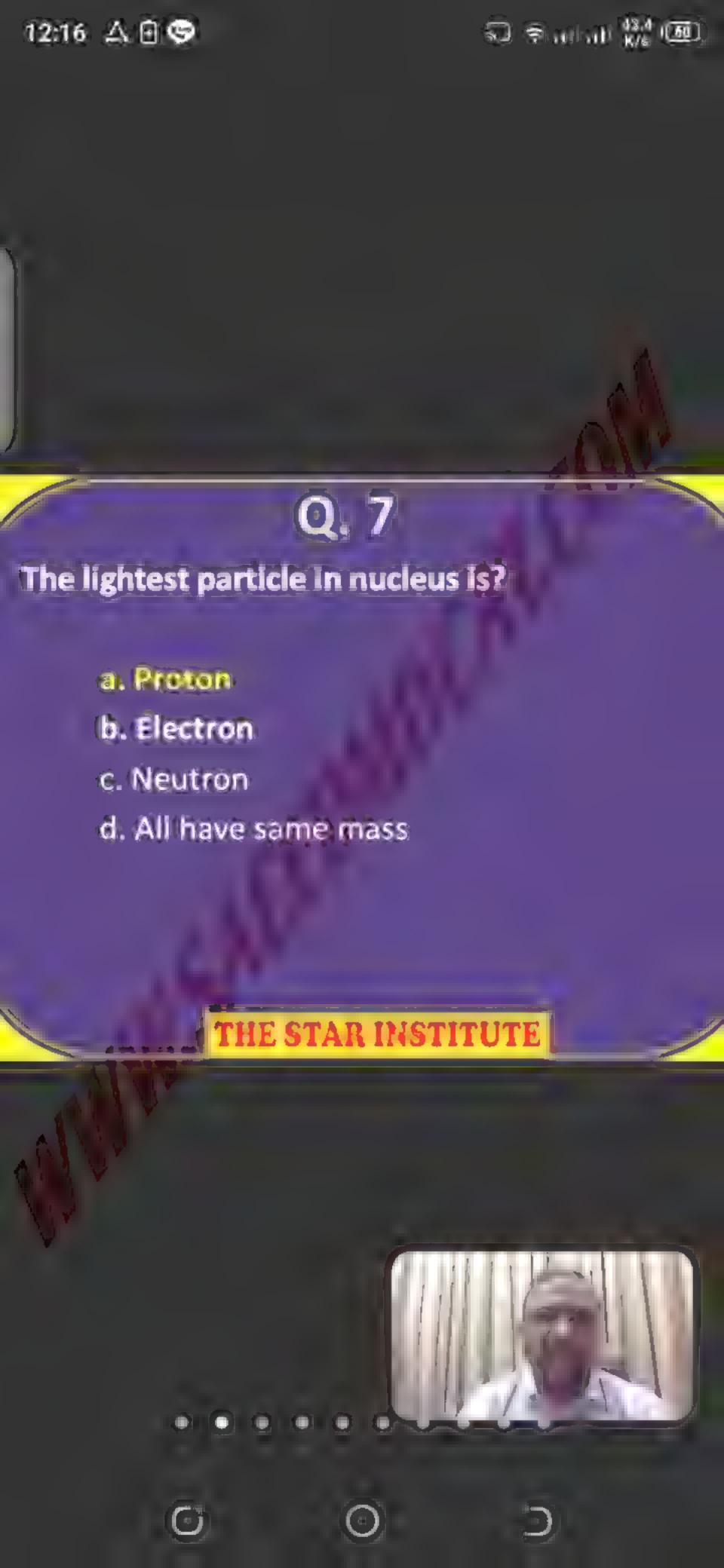






















All orbitals of a d-sub shell are represented with four lobes except:

- a. dxy
- $c. dz^2$

- b. d $x^2 y^2$
- d. dxz



















The electrons should be filled in the order of increasing energy values is according to:

- a Paul Exclusion Principle
- b. Hund's rule

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- c. Aufbau Principle
- d Planck's quantum theory



The ionization of an atom is:

O

- a. Always exothermic process
- b. May or may not be endothermic
- c. Always endothermic process
- d. May be exothermic or may be endothermic process



All of the following pairs are isoelectronic except

a. 5-2 and K*

16+2 19-1

O

b. F and Ne

9+1 10

c. NO and N₂ d. C₃H₈ and CO₂

7+8 7+7+1 18+8 6+16



Alpha rays are actually

- a. 1 protons 2 neutrons
- b. 2 protons 2 electrons
- c. 2 protons 2 neutrons
- d. 2 protons 1 neutrons

0



Their e/m ratio resembles with that of electrons

- a. Alpha rays
- b. Beta rays
- c. Gamma rays
- d. X-rays

The increasing penetration effect of atomic orbitals is:

- a. d < p < s < f b. p < s < d < f
- c. s < f < p < d | d | f < d < p < s

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Which have better penetrating power?

- a. Alpha rays
- b. Beta rays
- c. Gamma rays

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d X-rays

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If n = 3, / = 1, m +1, 0, -1 then orbital is:

a. 2s

b. 2p

c. 3p

d. 3d

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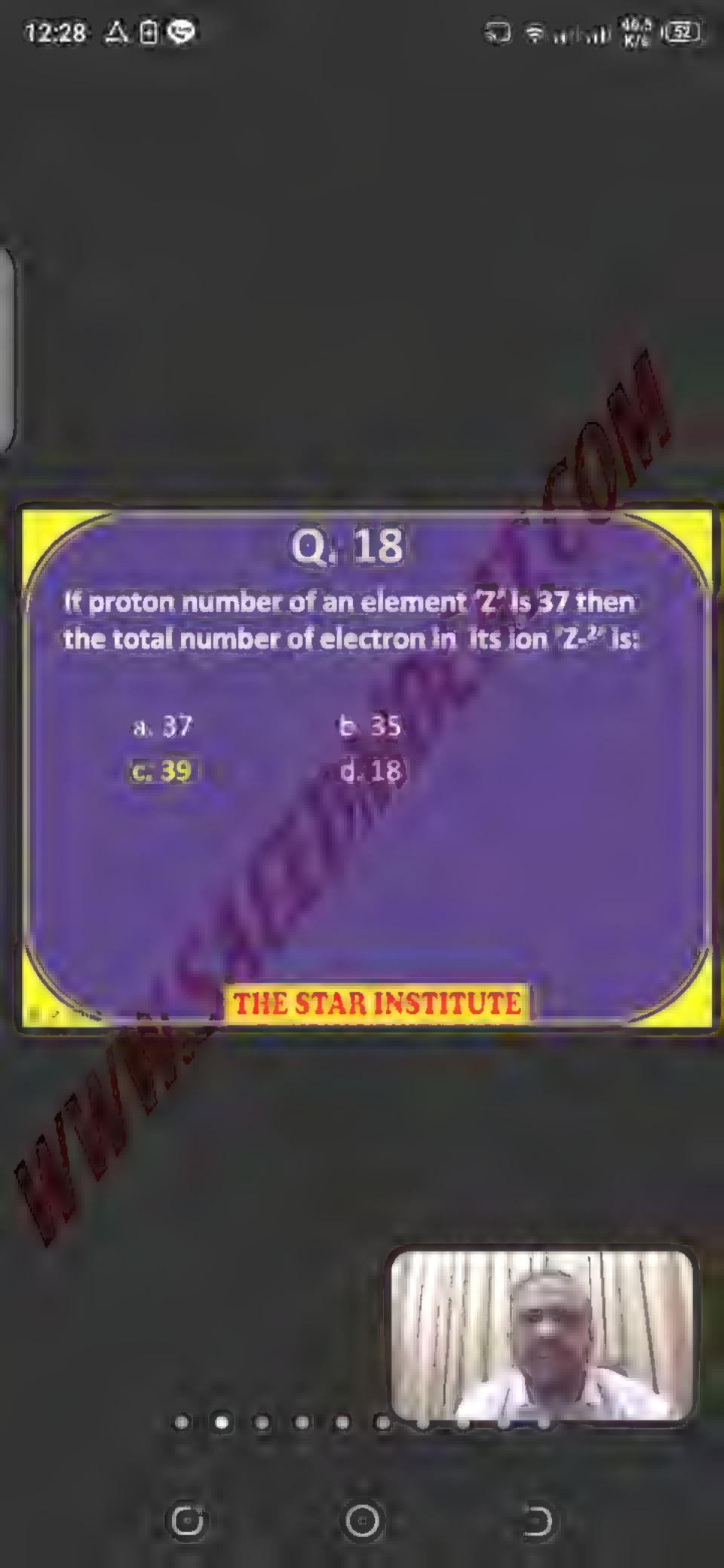


The element shows two valency if there is sufficient gap between:

- a Third ionization energy and fourth ionization energy
- b. First ionization energy and second ionization energy
- Second lonization energy and third ionization energy
- d. Fourth ionization energy and fifth ionization energy

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Which one of the following positive particles has maximum charge to mass ratio?

a. 0+ c. K+

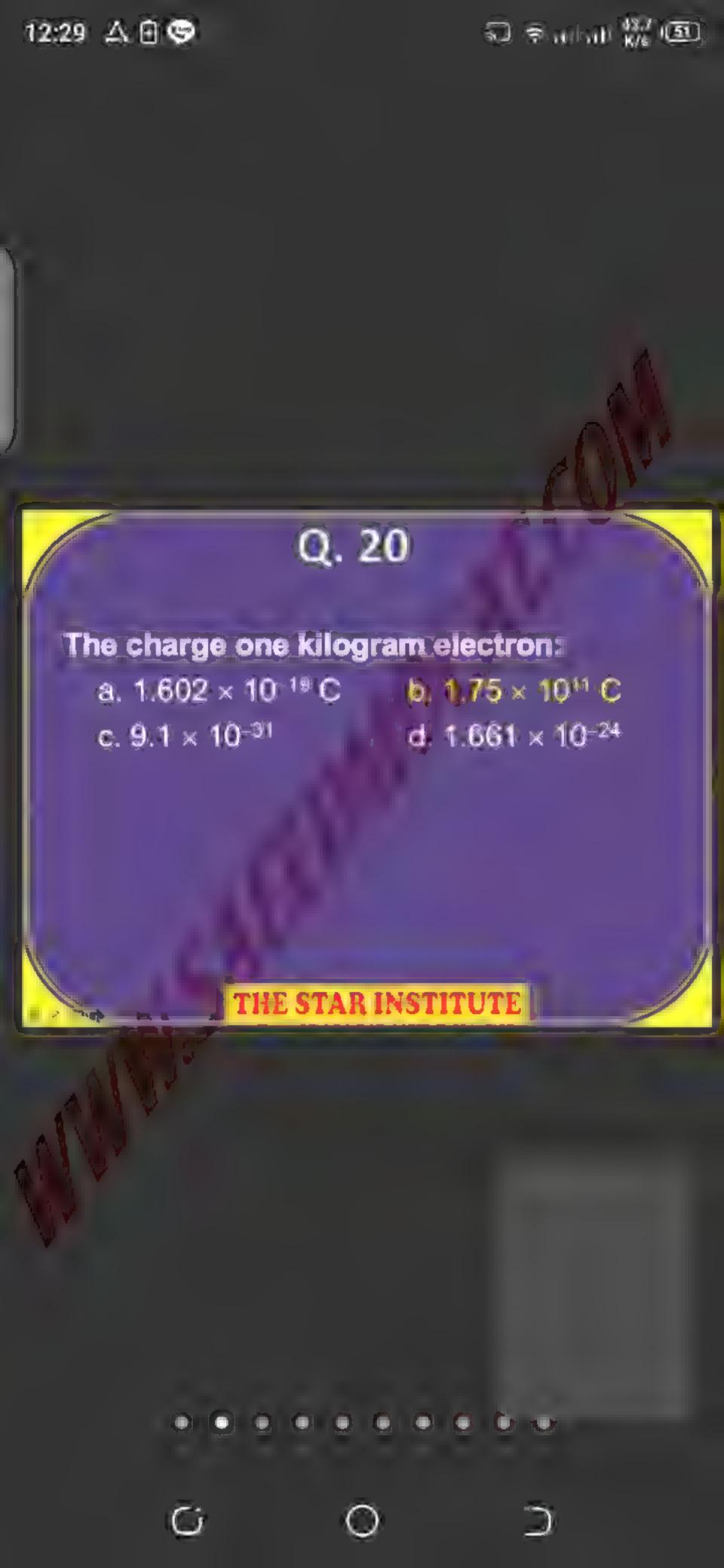
b. Na* d. H*

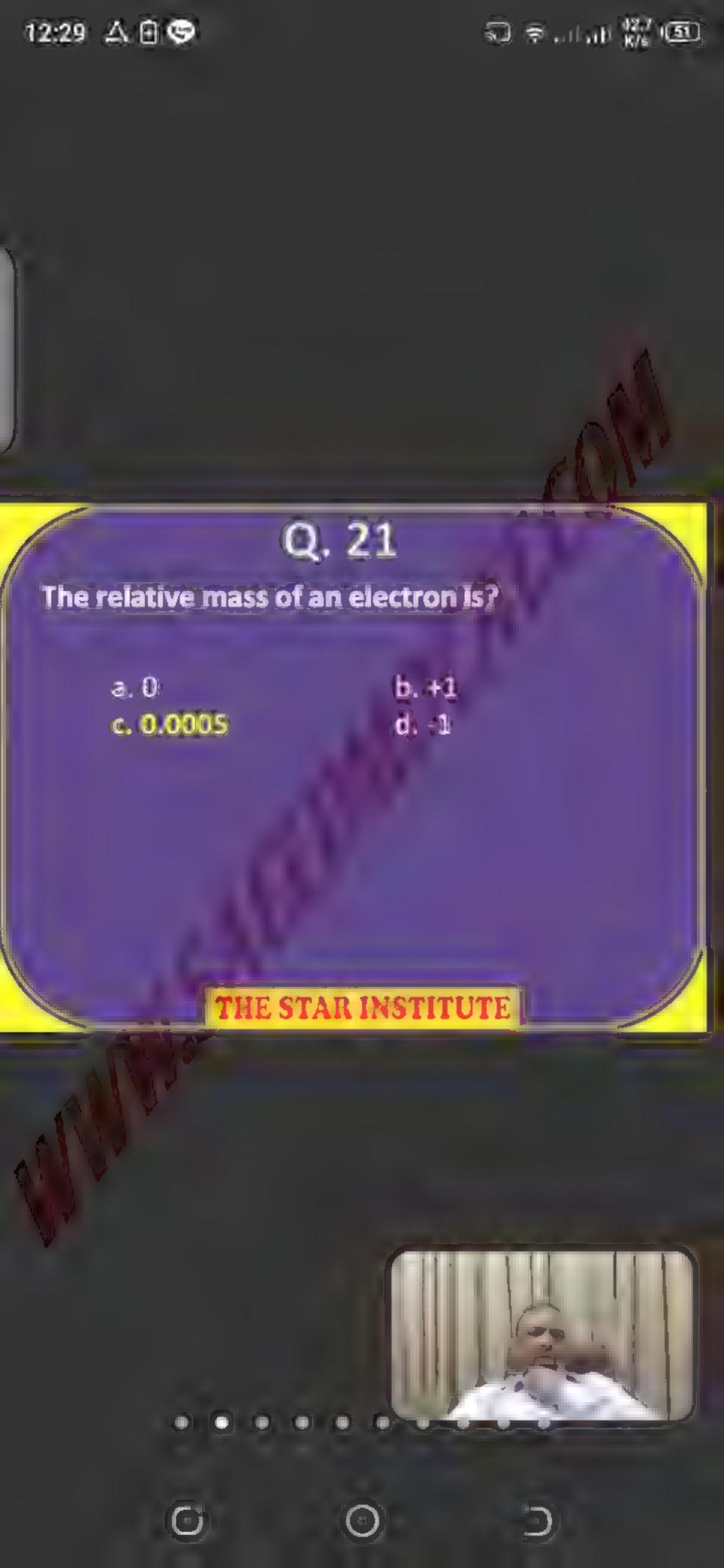
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If the nucleon number for the same element is different then its refers to:

- a, difference of electron
- b. Isotopes
- c. difference of protons
- d. All of these

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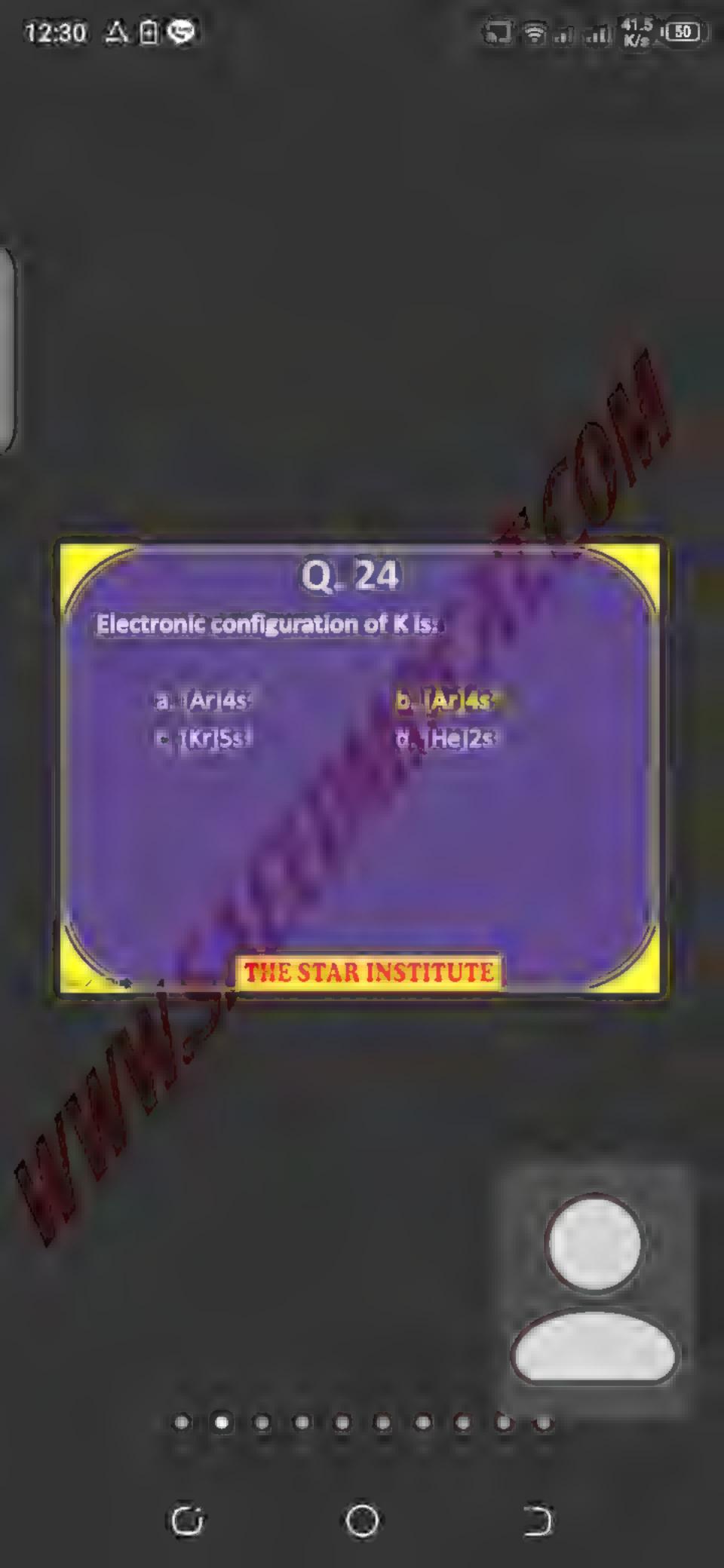
Sum of proton an neutrons in an atom is called its:

a. isotope

0

- b Atomic number
- c. Nucelon number
- a. Atomic mass

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A set of orbitals having same value of '1' is called:

a. Shell

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- b. Sub-shell
- c. molecular orbital d. Energy level



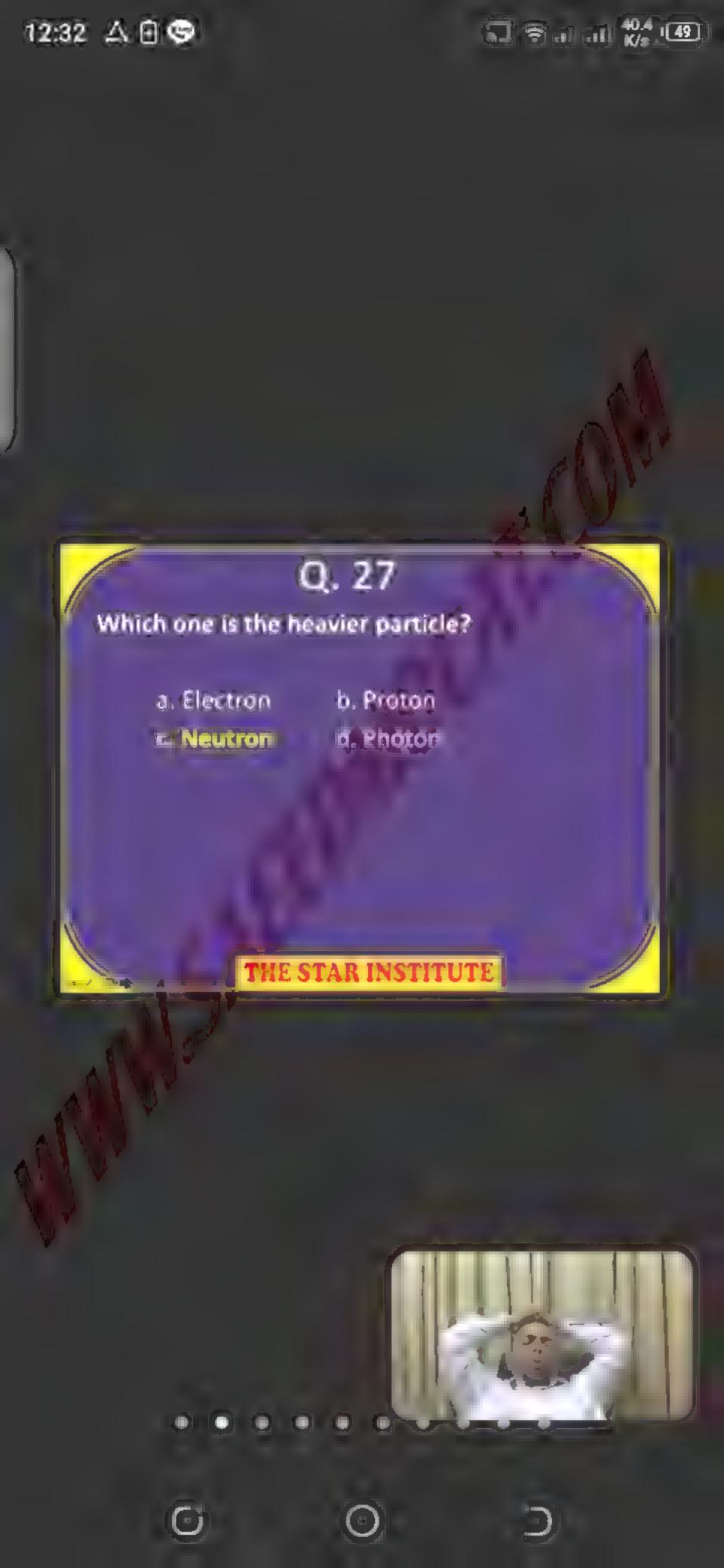
Which one of the following rule is used to arrange the sub energy levels in increasing order of energy?

a Hund's rule

E Octet rule

b. (n+/) rule

d Auf bau principle





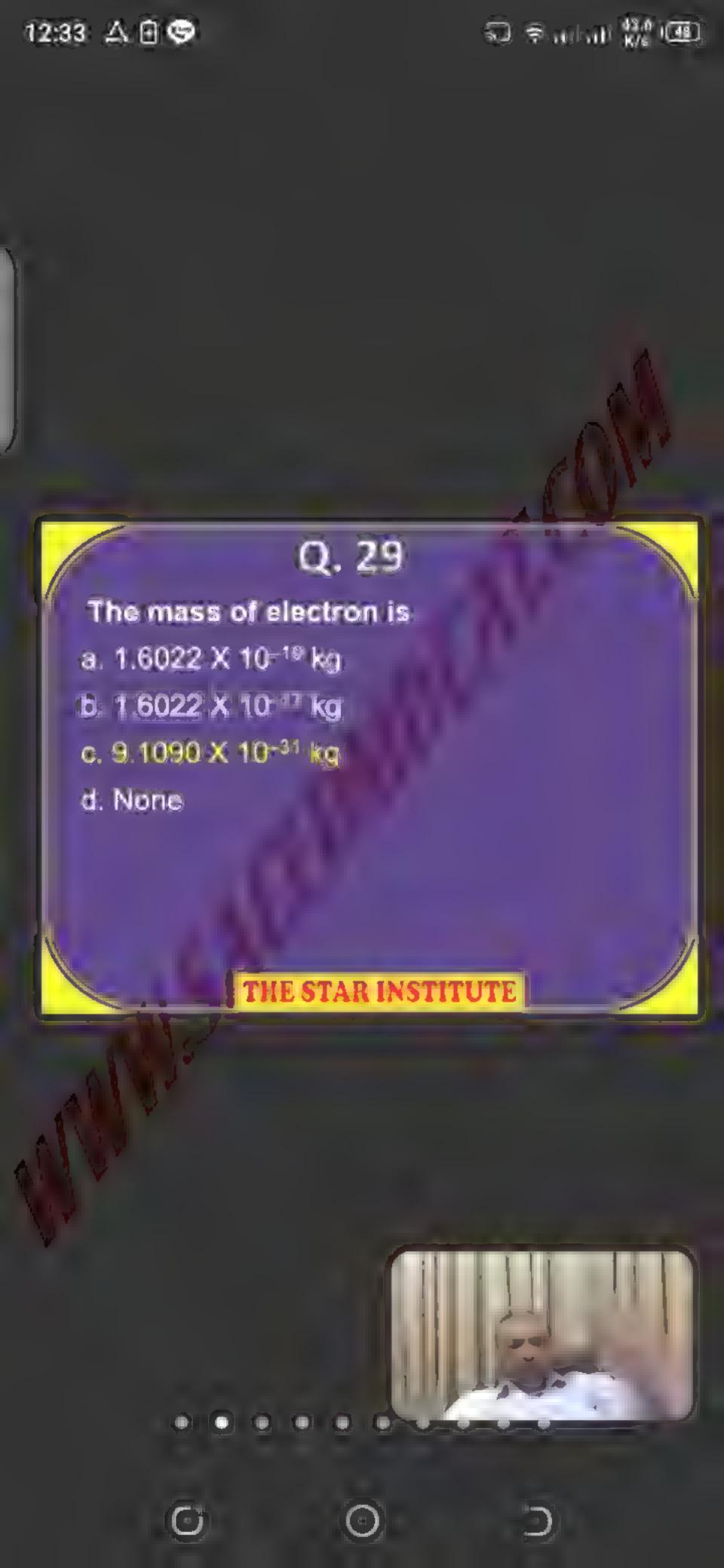
The total relative charge of an element is equal to:

- in its charge of electrons
- b. Zero

0

- Its Charge of protons
- d. None of these







Which one of the following determines the position of an element in the Periodic Table?

a chemical reactivity

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- b. first ionization energy
- c number of electrons in outer proital
- d number of protons in the nucleus of its atom





An element with 4pt valence electronic configuration will have period and group not in modern periodic table?

a. 4 and IV b. 4 and III

c. 4 and VI d. 4 and V

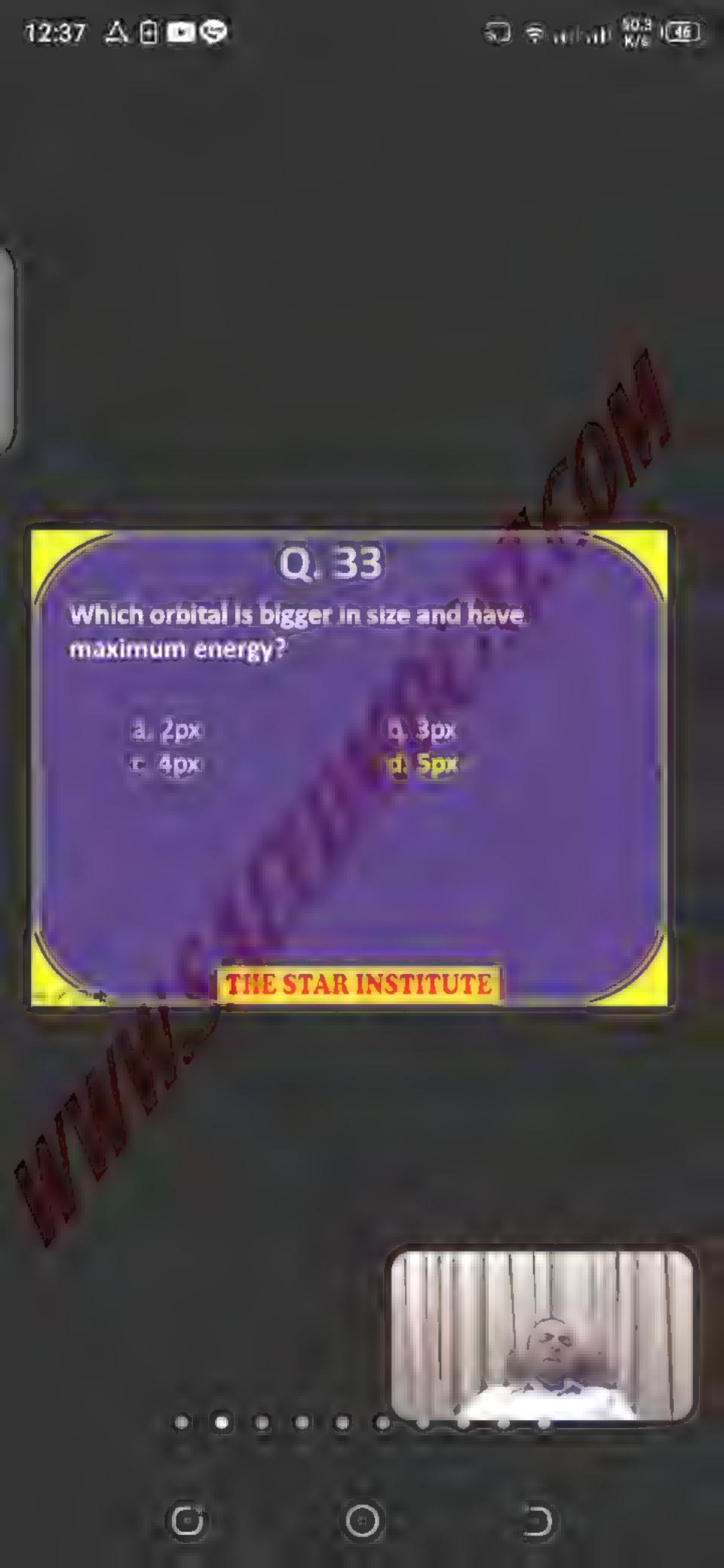


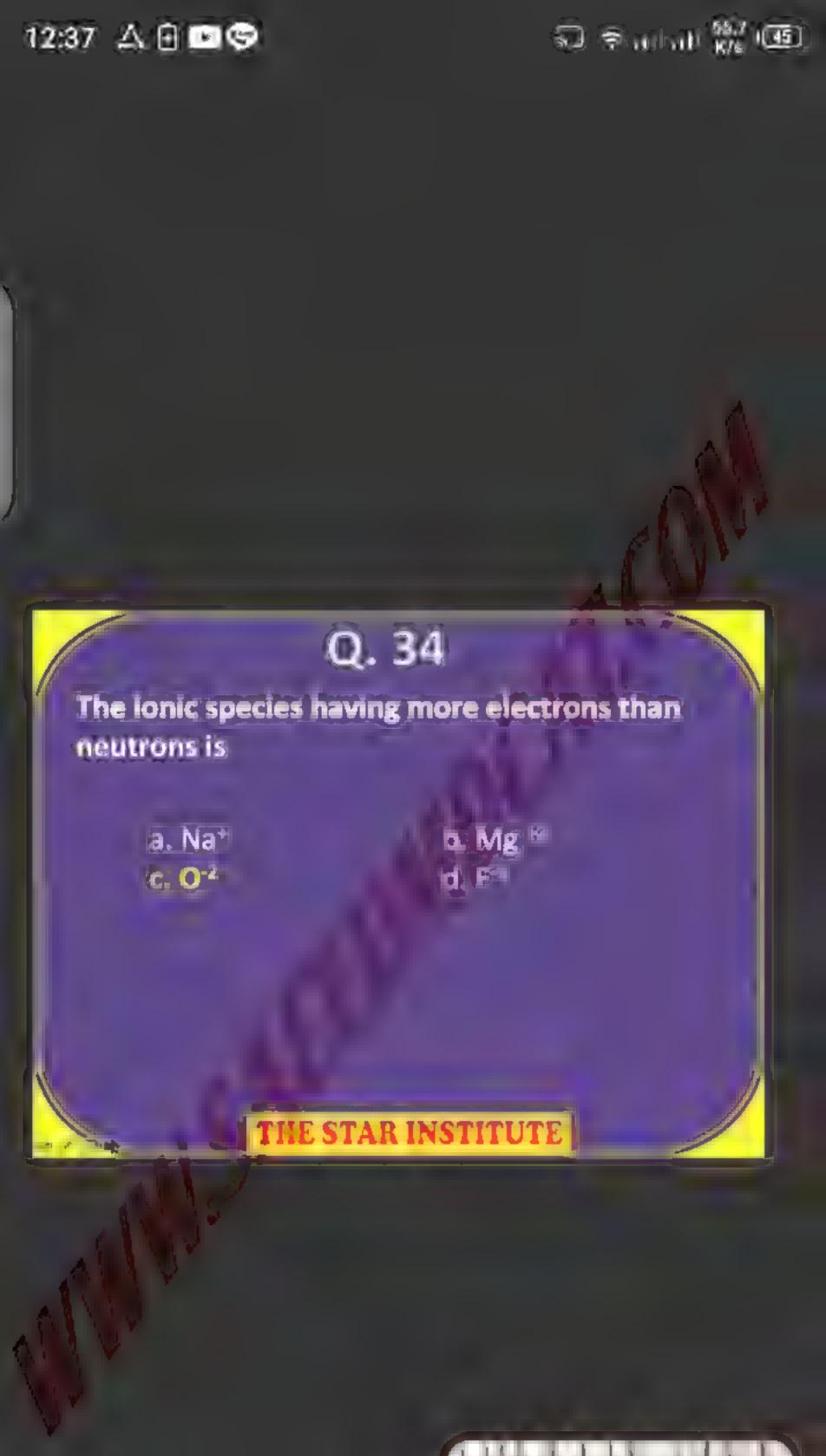
Q. 32 Which one of the following are Isosteres?

- a. H and H
- b. N. and CO
- C C12 and O14
- d At 20 and 20 Ca 40

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Isosteres: one of two or more substances (as carbon monoxide and molecular nitrogen) that exhibit similarity of some properties as a result of having the same number of total or valence electrons in the same arrangement and that consist of pifferent atoms and not necessarily the same number of atoms.









What kind of orbital must an electron with the principal quantum number n=2 occupy?

- a. a spherically -shaped orbital
- b. either an sor p orbital

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- c, the orbital closest to the nucleus
- d. a dumb-bell-shaped orbital

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Which property is the same for the two nuclides $\frac{40}{18}$ Ar and $\frac{40}{19}$ K?

- a. the number of electrons
- b. the number of neutrons
- c. the number of nucleons
- d. the number of protons

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A spinning electron creates

C

- a. magnetic field b. electric field
- c. quantum field d. none

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Atomic number of an element is 17. The number of pairs of paired and also unpaired electrons in the valence shell of atom is:

a. 1, 3

c. 2, 2

b. 3, 1

d. 4, 1

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C

The correct set of quantum number for unpaired electron in sodium atom is:

n / m

a. 2 0 0

b. 3 0 0

c. 2 1 1

d. 3 0 1

C

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The divisibility of atom was shown by

- a. Stoney
- b. J.J Thomson
- c. Millikan

C

d. Rutherford

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